

# **Strategic Regional Arterial**

**U.S. 12 (Rand Road)  
Illinois 31 to Illinois 58**

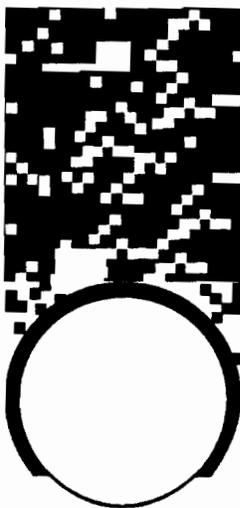


**Operation  
GreenLight**

**Illinois Department of Transportation  
November 1994**

# ***S*trategic *R*egional *A*rterial**

***U.S. 12 (Rand Road)  
Illinois 31 to Illinois 58***



**Operation  
GreenLight**

**Illinois Department of Transportation  
November 1994**

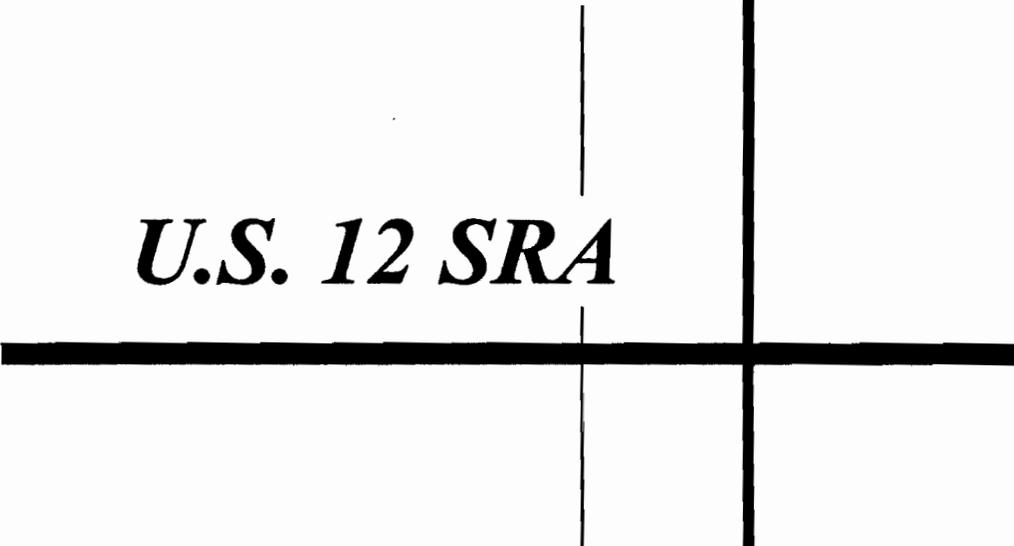
## **Foreword**

U.S. Route 12 (Rand Road) is a Strategic Regional Arterial (SRA) from Illinois 31 to Illinois 58 (Golf Road). CH2M HILL Inc., has prepared this SRA report for U.S. Route 12 for the Illinois Department of Transportation and the Strategic Regional Arterial Subcommittee of the Work Program Committee of the Chicago Area Transportation Study.

As a SRA route, U.S. Route 12 is intended to function as part of a regional arterial system, carrying long-distance as well as local traffic in conjunction with other SRA routes and the regional expressway and transit systems. This report is one element of a long-range plan for all routes in the SRA network. Together, the route studies constitute a comprehensive, coordinated plan for the entire SRA network.

This report includes a description of the SRA study objectives and process, a detailed exposition and analysis of the existing route conditions, recommendations for ultimate and basic improvements, and documentation of the public involvement process including citizen comments.

*U.S. 12 SRA*



**Summary of  
Recommendations**



## **Summary of Recommendations**

For study purposes, the U.S. 12 Strategic Regional Arterial (SRA) was divided into six segments (see Exhibit S-1, attached following this section). The following is a summary of the major recommendations for each segment.

### **SRA Segment I: Illinois 31 to State Park Road (7.0 Miles)**

- From Illinois 31 to North Solon Road and from May Lane to Johnsburg Wilmot Road, two through lanes in each direction with an 18-foot raised median, generally within 100 to 110 feet of right-of-way, requiring acquisition of up to 30 feet of right-of-way
- From North Solon Road to May Lane and from Johnsburg Wilmot Road to Fox Lake Road, two through lanes in each direction of travel with an 8-foot raised median, within existing right-of-way (80 to 105 feet)
- At major intersections such as Illinois 31, intersection capacity, channelization, and signalization improvements
- New potential signalized intersections are proposed at East Solon Road, Sherwood Forest Drive, and Richardson Road
- Geometric improvements to at-grade, stop-controlled intersection at Kuhn Road, with relocated at-grade railroad crossing
- Relocation of North Solon Road to intersect with East Solon Road, remove North Solon Road intersection at U.S. 12
- Develop future access roads between Sherwood Forest Drive and Winn Road to accommodate access to future land use

### **SRA Segment II: State Park Road to Illinois 59 (3.0 Miles)**

- From State Park Road to approximately Kings Drive, maintain the existing cross section, two through lanes in each direction with a 10- to 12-foot

flush median, generally within 64 to 110 feet of right-of-way, requiring no additional right-of-way

- From Kings Drive to Illinois 59, maintain existing cross section, two through lanes in each direction with a 10- to 12-foot flush median, two way frontage roads provided on each side of U.S. 12
- Improve geometrics of U.S. 12 and Oak Street intersection by relocating and reconstructing existing intersection
- New potential signalized intersection at Kings Drive, restrict cross-median access at intersection just south of Kings Drive
- Develop access management/access consolidation plan along U.S. 12 through Fox Lake

### **SRA Segment III: Illinois 59 to Bonner Road (6.3 Miles)**

- From Illinois 59 to Bonner Road, three through lanes in each direction with a 40-foot open median with open drainage, within 200 to 300 feet of right-of-way; 100 feet of additional right-of-way is required north of “old” Illinois 120 to relocated Illinois 120.
- Modify the Illinois 59 interchange, develop two-lane exit northbound to drop third through lane along U.S. 12, develop southbound entrance as an add lane design to add third through lane southbound along U.S. 12
- Add two-way frontage roads south from Illinois 134 (Big Hollow Road) to Brandenburg Road to obtain continuous frontage road system
- Develop future access roads between Molidor Road and Fox Lake Road to serve anticipated future development
- Reconstruct Fox Lake Road intersection with U.S. 12
- Extend Callahan Road west to U.S. 12, develop conventional “T” intersection with U.S. 12

- New potential signalized intersections are proposed along U.S. 12 at seven locations, including U.S. 12 intersections with Brandenburg Road, Molidor Road, Fox Lake Road, Future Access Road (south of Illinois 120), Future Access Road (north of Case Road), Case Road, and Old Rand Road/Callahan Road; channelization and capacity improvements are also recommended at these locations, with all signal spacing greater than 1/4 mile

#### **SRA Segment IV: Bonner Road to Miller Road (5.7 Miles)**

- From Bonner Road to Miller Road, three through lanes in each direction with an open 40-foot median, open drainage, within 200 feet of right-of-way, typical section requires no additional right-of-way
- Provide auxiliary lane southbound along U.S. 12 between Illinois 176 and Illinois 59, to facilitate weaving traffic, requiring 5 feet of additional right-of-way
- Develop continuous right-turn lane along northbound U.S. 12 south of Bonner Road and southbound along U.S. 12 between Lake Shore Drive and McHenry Road, requiring 5 feet of additional right-of-way
- Develop two-way frontage roads along northbound U.S. 12 from Ivanhoe Road to Illinois 59 and along northbound and southbound U.S. 12 north of Miller Road; additional right-of-way will be required
- Restrict access to interchanges at Illinois 176 and Illinois 59, remove all local access, construct cul-de-sacs at Slocum Lake Road, construct local access road to provide alternate access at Illinois 176 southbound entrance ramp
- Restrict access at Ivanhoe Road, permit right turn in and right turn out only
- Extend Timberlake Drive east across U.S. 12 to serve potential future development, potential new signalized intersection

- Provide future signal at Wynstone residential development, extend roadway east to serve Mount St. Joseph's Community Children's Home property east of U.S. 12

### **SRA Segment V: Miller Road to Lake-Cook Road (6.1 Miles)**

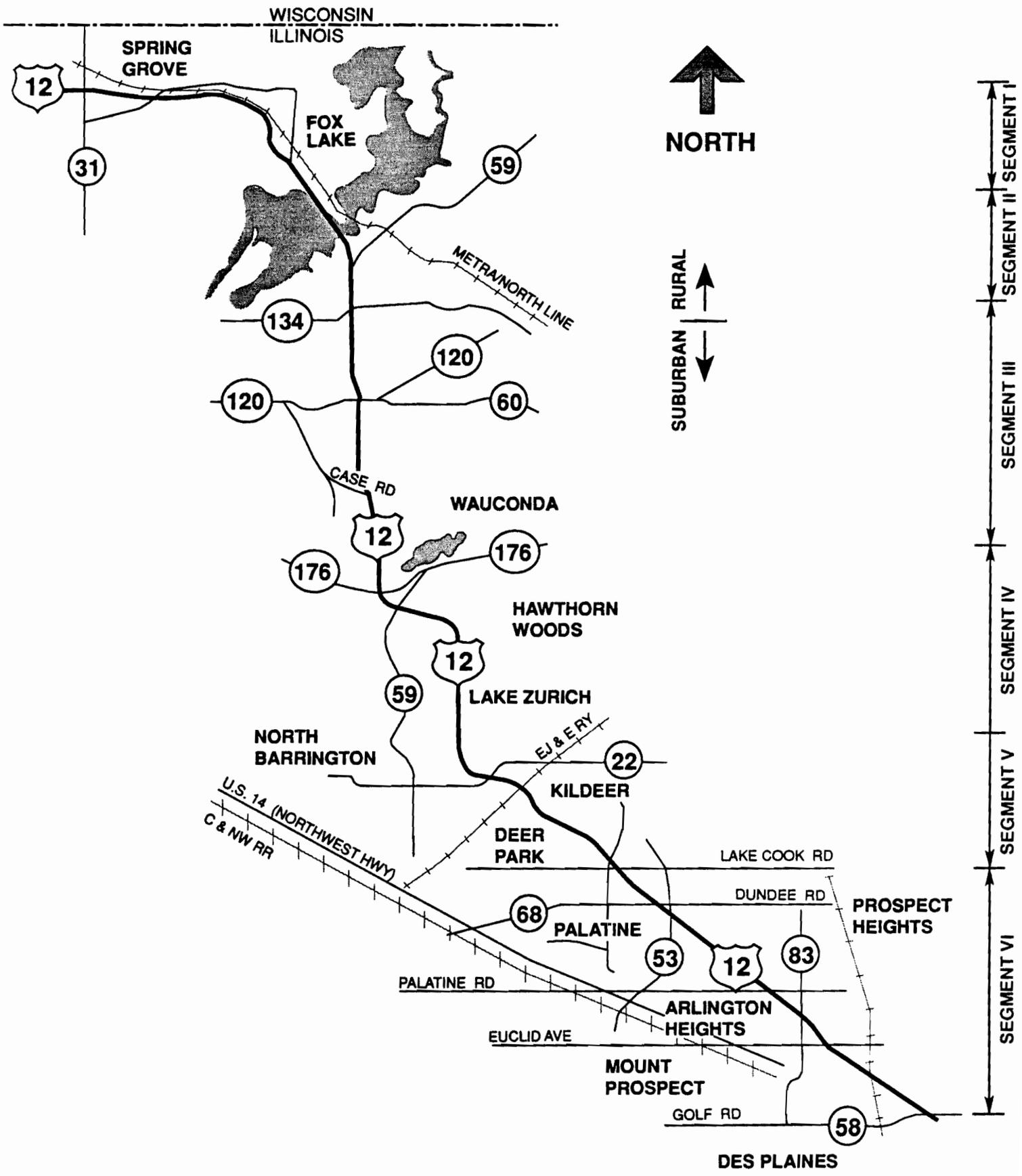
- From Miller Road to south of North Old Rand Road, three through lanes in each direction with an open 40-foot median, open drainage, within 200 feet of right-of-way, requiring no additional right-of-way
- From south of North Old Rand Road to South of Quentin Road, three through lanes in each direction of travel with a 30-foot raised median, closed drainage, within 130 to 150 feet of right-of-way, requiring the acquisition of about 30 feet of right-of-way just north of Quentin Road
- From south of Quentin Road to Lake-Cook Road, three through lanes in each direction of travel with a 16-foot raised median, within 120 feet of right-of-way, requiring the acquisition of about 20 feet of additional right-of-way
- Realign/relocate the U.S. 12 and Old Rand Road intersection (north of Cuba Road) approximately 500 feet to the west to intersect at right angle
- Between Ravinia Terrace and Signal Hill Road, provide right-in/right-out access only at Country Club Road and Wilmette Terrace, provide cul-de-sacs at Glencoe, Winnetka, Kenilworth, Evanston Terrace, and Whitney Road; develop new signalized intersection at Signal Hill Road
- Develop future local access road along U.S. 12 between Long Grove Road and Lake-Cook Road to provide access to existing and future development (location to be determined)
- Extend Plum Grove Road south from U.S. 12 to intersect with Lake-Cook Road, develop conventional 4-leg intersection at U.S. 12

- Intersection channelization improvements including dual left-turn lanes along U.S. 12 at the SRA to SRA intersections of Illinois 22, Quentin Road and Lake-Cook Road

### **SRA Segment VI: Lake-Cook Road to Golf Road (6.1 Miles)**

- From Lake-Cook Road to south of Illinois 53, three 12-foot through lanes in each direction with an 18-foot raised median, within 120 feet of right-of-way, requiring 10 feet of additional right-of-way along both sides of U.S. 12
- From south of Illinois 53 to north of Hintz Road, three 11-foot through lanes in each direction of travel, with a 4-foot raised median, closed drainage, within existing right of way of 100 feet
- From Hintz Road to Arlington Heights Road, from Palatine Road to Camp McDonald Road, from north of Schoenbeck Road to Business Center Drive, from North of Mount Prospect Road to south of Central Road, and from 3rd Avenue to Golf Road, three 11-foot through lanes in each direction of travel, with a raised 16-foot median, and closed drainage, within 110 feet of right-of-way, requiring an additional 5 feet of right of way from both sides of U.S. 12
- From Arlington Heights Road to Palatine Road, three 11-foot through lanes, with a raised 30-foot median, and closed drainage within 130 feet of right-of-way
- From south of Camp McDonald Road to north of Schoenbeck Road, three 11-foot through lanes in each direction of travel, with a flush 11-foot median and close drainage, within existing right-of-way
- From south of Central Road to north of 3rd Avenue, three 11-foot through lanes in each direction of travel, with a raised 4-foot median, and closed drainage, within existing right-of-way (100 feet)
- South from Lake-Cook Road to south of Hicks Road, develop a two-way future access road on east side of U.S. 12 (location to be determined)

- Extend Williams Drive to the north across U.S. 12 to provide continuity between Dundee Road to U.S. 12
- Extend Hintz Road to the south across U.S. 12 adjacent to utility line, tie to existing frontage road parallel to Illinois 53
- Develop new signalized access roads east and west of the Elmhurst Road/Kensington Road/U.S. 12 intersection triangle, eliminate left turns off of U.S. 12 at Elmhurst Road and Kensington Road
- Develop new circulation road south of Central Road, provide future signalized intersection, eliminate left turns from Central Road to U.S. 12
- Extend Camp McDonald Road west to tie with Oakton Street
- Provide future signalized intersection at new access road south of Hicks Road as well as at new circulation roads north and south of Elmhurst Road/Kensington Road/U.S. 12 intersection triangle and south of Central Road
- Construct intersection channelization improvements including dual left-turn lanes along U.S. 12 at the SRA to SRA intersection of Golf Road (Illinois 58) and Palatine Road, as well as the major intersections of Dundee Road and Arlington Heights Road and Euclid Avenue with U.S. 12



LOCATION MAP U.S. 12

# Strategic Regional Arterial Study U.S. 12 (Rand Road)

## Contents

### Chapter

	<u>Page</u>
Summary of Recommendations . . . . .	S-1
<b>I. Introduction . . . . .</b>	<b>I-1</b>
SRA Planning Objectives . . . . .	I-3
SRA Design Concept . . . . .	I-4
Organization of the Report . . . . .	I-4
Time Frame . . . . .	I-5
<b>II. Existing Conditions . . . . .</b>	<b>II-1</b>
Corridor Overview . . . . .	II-4
Current Planning, Design, and Construction Activity . . . . .	II-8
Detailed Summary of U.S. 12 by Segment Definitions . . . . .	II-10
Segment I—“Spring Grove” . . . . .	II-10
Segment II—“Fox Lake” . . . . .	II-20
Segment III—“Lakemoor to Wauconda” . . . . .	II-28
Segment IV—“Wauconda to North Barrington” . . . . .	II-38
Segment V—“Lake Zurich to Kildeer” . . . . .	II-47
Segment VI—“Arlington Heights to Des Plaines” . . . . .	II-58
Summary . . . . .	II-73
<b>III. U.S. 12 SRA Planning Framework . . . . .</b>	<b>III-1</b>
Functional Classification . . . . .	III-2
Route Design Considerations . . . . .	III-2
The 2010 Transportation Network . . . . .	III-4
Year 2010 and Existing Traffic . . . . .	III-5
Other Corridor Planning Activities . . . . .	III-9
Future Land Use and Development . . . . .	III-13
Existing Environmental Constraints, Unique Conditions, and Areas of Concern . . . . .	III-14
Community Concerns, Interests, and Attitudes . . . . .	III-16
Recommended SRA Corridor Concept for U.S. 12 . . . . .	III-18
<b>IV. Recommended U.S. 12 SRA Plan . . . . .</b>	<b>IV-1</b>
Segment I—“Spring Grove” . . . . .	IV-2
Segment II—“Fox Lake” . . . . .	IV-13

**Contents (continued)**

	<u>Page</u>
Segment III—“Lakemoor to Wauconda” . . . . .	IV-21
Segment IV—“Wauconda to North Barrington” . . . . .	IV-32
Segment V—“Lake Zurich to Kildeer” . . . . .	IV-43
Segment VI—“Arlington Heights to Des Plaines” . . . . .	IV-58
U.S. 12 Corridor Summary . . . . .	IV-79
Operational Analysis of the U.S. 12 Corridor . . . . .	IV-79
Implementation Costs . . . . .	IV-81
Project Prioritization . . . . .	IV-81
V. Public Involvement . . . . .	V-1
Advisory Panel Meeting Minutes . . . . .	V-2
Bimonthly Newsletters . . . . .	V-30
Public Hearing Comments, Questions, and Responses . . . . .	V-97

***Appendix***

- A. Year 2010 Intersection Planning Capacity Analysis and Arterial Analysis
- B. U.S. 12 and Illinois 22 Intersection Alternatives
- C. U.S. 12 and Oak Street Intersection Alternatives
- D. U.S. 12—Schoenbeck to Camp McDonald Alternatives Presented by Rolling Green Country Club

**Exhibit**

**Page**

S-1 Location Map—U.S. 12 (Northwest Highway) . . . . . S-7

1 Route Types on the Strategic Regional Arterial System . . . . . I-2

2 Corridor Map—U.S. 12 . . . . . II-2

A-1 Existing Conditions—U.S. 12—Illinois 31 to East Solon Road . . . . . II-14

A-2 Existing Conditions—U.S. 12—May Lane to Richardson Road . . . . . II-15

A-3 Existing Conditions—U.S. 12—North of Johnsburg Wilmot Road to  
Fox Lake Road . . . . . II-16

B-1 Planning Focus Areas—U.S. 12—Illinois 31 to East Solon Road . . . . . II-17

B-2 Planning Focus Areas—U.S. 12—May Lane to Richardson Road . . . . . II-18

B-3 Planning Focus Areas—U.S. 12—North of Johnsburg Wilmot Road to  
Fox Lake Road . . . . . II-19

A-4 Existing Conditions—U.S. 12—Fox Lake Road to Sayton Road . . . . . II-24

A-5 Existing Conditions—U.S. 12—Sayton Road to Illinois 134 . . . . . II-25

B-4 Planning Focus Areas—U.S. 12—Fox Lake Road to Sayton Road . . . . . II-26

B-5 Planning Focus Areas—U.S. 12—Sayton Road to Illinois 134 . . . . . II-27

A-6 Existing Conditions—U.S. 12—North of Brandenburg Road to  
Fox Lake Road . . . . . II-32

A-7 Existing Conditions—U.S. 12—Fox Lake Road to South of Gilmer Road . . . . . II-33

A-8 Existing Conditions—U.S. 12—North of Case Road to Bonner Road . . . . . II-34

B-6 Planning Focus Areas—U.S. 12—North of Brandenburg Road to  
Fox Lake Road . . . . . II-35

B-7 Planning Focus Areas—U.S. 12—Fox Lake Road to South of  
Gilmer Road . . . . . II-36

B-8 Planning Focus Areas—U.S. 12—North of Case Road to Bonner Road . . . . . II-37

A-9 Existing Conditions—U.S. 12—Bonner Road to Illinois 59 . . . . . II-41

A-10 Existing Conditions—U.S. 12—Illinois 59 to McHenry Road . . . . . II-42

A-11 Existing Conditions—U.S. 12—McHenry Road to Miller Road . . . . . II-43

B-9 Planning Focus Areas—U.S. 12—Bonner Road to Illinois 59 . . . . . II-44

B-10 Planning Focus Areas—U.S. 12—Illinois 59 to McHenry Road . . . . . II-45

B-11 Planning Focus Areas—U.S. 12—McHenry Road to Miller Road . . . . . II-46

A-12 Existing Conditions—U.S. 12—Miller Road to Ela Road . . . . . II-52

A-13 Existing Conditions—U.S. 12—Ela Road to South of Cuba Road . . . . . II-53

***Exhibit***

***Page***

A-14 Existing Conditions—U.S. 12—North of Quentin Road to  
Lake-Cook Road . . . . . II-54

B-12 Planning Focus Areas—U.S. 12—Miller Road to Ela Road . . . . . II-55

B-13 Planning Focus Areas—U.S. 12—Ela Road to South of Cuba Road . . . II-56

B-14 Planning Focus Areas—U.S. 12—North of Quentin Road to  
Lake-Cook Road . . . . . II-57

A-15 Existing Conditions—U.S. 12—Lake-Cook Road to South of  
Williams Drive . . . . . II-63

A-16 Existing Conditions—U.S. 12—Illinois 53 to  
Arlington Heights Road . . . . . II-64

A-17 Existing Conditions—U.S. 12—Arlington Heights Road to  
Camp McDonald Road . . . . . II-65

A-18 Existing Conditions—U.S. 12—North of Schoenbeck Road to  
Henry Road . . . . . II-66

A-19 Existing Conditions—U.S. 12—Henry Road to Illinois 58  
(Golf Road) . . . . . II-67

B-15 Planning Focus Areas—U.S. 12—Lake-Cook Road to South of  
Williams Drive . . . . . II-68

B-16 Planning Focus Areas—U.S. 12—Illinois 53 to Arlington Heights  
Road . . . . . II-69

B-17 Planning Focus Areas—U.S. 12—Arlington Heights Road to  
Camp McDonald Road . . . . . II-70

B-18 Planning Focus Areas—U.S. 12—North of Schoenbeck Road to  
Henry Road . . . . . II-71

B-19 Planning Focus Areas—U.S. 12—Henry Road to Illinois 58  
(Golf Road) . . . . . II-72

3 SRA Desirable Cross Section . . . . . III-3

4 Future Transportation Network in the Vicinity of U.S. 12 . . . . . III-8

5 Recommended SRA Corridor Concept—U.S. 12 . . . . . III-20

C-1 U.S. 12 Recommended Plan—Illinois 31 to East Solon Road . . . . . IV-9

C-2 U.S. 12 Recommended Plan—May Lane to Richardson Road . . . . . IV-10

C-3 U.S. 12 Recommended Plan—North of Johnsburg Wilmot Road  
to Fox Lake Road . . . . . IV-11

***Exhibit***

**Page**

D-1	U.S. 12 and Illinois 31 Intersection Detail . . . . .	IV-12
C-4	U.S. 12 Recommended Plan—Fox Lake Road to Sayton Road . . . . .	IV-19
C-5	U.S. 12 Recommended Plan—Sayton Road to Illinois 134 . . . . .	IV-20
C-6	U.S. 12 Recommended Plan—North of Brandenburg Road to Fox Lake Road . . . . .	IV-28
C-7	U.S. 12 Recommended Plan—Fox Lake Road to South of Gilmer Road . . . . .	IV-29
C-8	U.S. 12 Recommended Plan—North of Case Road to Bonner Road . . . . .	IV-30
D-2	U.S. 12 and Illinois 120 Intersection Detail . . . . .	IV-31
C-9	U.S. 12 Recommended Plan—Bonner Road to Illinois 59 . . . . .	IV-40
C-10	U.S. 12 Recommended Plan—Illinois 59 to McHenry Road . . . . .	IV-41
C-11	U.S. 12 Recommended Plan—McHenry Road to Miller Road . . . . .	IV-42
C-12	U.S. 12 Recommended Plan—Miller Road to Ela Road . . . . .	IV-52
C-13	U.S. 12 Recommended Plan—Ela Road to South of Cuba Road . . . . .	IV-53
C-14	U.S. 12 Recommended Plan—North of Quentin Road to Lake-Cook Road . . . . .	IV-54
D-3	U.S. 12 and Illinois 22 Intersection Detail . . . . .	IV-55
D-4	U.S. 12 and Quentin Road Intersection Detail . . . . .	IV-56
D-5	U.S. 12 and Lake-Cook Road Intersection Detail . . . . .	IV-57
C-15	U.S. 12 Recommended Plan—Lake-Cook Road to South of Williams Drive . . . . .	IV-70
C-16	U.S. 12 Recommended Plan—Illinois 53 to Arlington Heights Road . . . . .	IV-71
C-17	U.S. 12 Recommended Plan—Arlington Heights Road to Camp McDonald Road . . . . .	IV-72
C-18	U.S. 12 Recommended Plan—North of Schoenbeck Road to Henry Road . . . . .	IV-73
C-19	U.S. 12 Recommended Plan—Henry Road to Illinois 58 (Golf Road) . . . . .	IV-74
D-6	U.S. 12 and Palatine Road Intersection Detail . . . . .	IV-75
D-7	U.S. 12 and Illinois 83 and Kensington Road Intersection Detail . . . . .	IV-76
D-8	U.S. 12 and Central Road and Mt Prospect Road Intersection Detail . . . . .	IV-77
D-9	U.S. 12 and Illinois 58 Intersection Detail . . . . .	IV-78

**Table**

	<u>Page</u>
1	Sources of Data Describing Traffic and Transportation Characteristics of U.S. 12 in 1991/1992 . . . . . II-3
2	Average Daily Traffic Volumes Along U.S. 12 in 1986/1988/1989 . . . . . II-5
3	Existing Transit Facilities and Rail Operation Along U.S. 12 . . . . . II-6
4	Sources of Environmental and Land Use Data Along U.S. 12 . . . . . II-9
5	Existing Structures Along Segment I of U.S. 12 . . . . . II-11
6	Summary of Environmentally Sensitive Land Uses and Sites Along Segment I of U.S. 12 . . . . . II-13
7	Existing Structures Along Segment II of U.S. 12 . . . . . II-21
8	Existing Structures Along Segment III of U.S. 12 . . . . . II-29
9	Existing Structures Along Segment IV of U.S. 12 . . . . . II-39
10	Existing Structures Along Segment V of U.S. 12 . . . . . II-48
11	Summary of Environmentally Sensitive Land Uses and Sites Along Segment V of U.S. 12 . . . . . II-51
12	Existing Structures Along Segment VI of U.S. 12 . . . . . II-59
13	Summary of Environmentally Sensitive Land Uses and Sites Along Segment VI of U.S. 12 . . . . . II-62
14	Year 2010 Desirable Route Characteristics for Rural SRAs . . . . . III-6
15	Year 2010 Desirable Route Characteristics for Suburban SRAs . . . . . III-7
16	Year 2010 ADT Forecast for U.S. 12 . . . . . III-9
17	Summary of Previous and Concurrent Planning Studies Relevant to U.S. 12 . . . . . III-11
18	Future Transit Facilities and Operations Proposed and/or Planned by Others for U.S. 12 . . . . . III-12

**Table**

**Page**

19	Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12—Segment I . . . . .	IV-3
20	Evaluation of Signalized Intersection Operations Along Segment I of U.S. 12 . . . . .	IV-7
21	Evaluation of Signalized Intersection Operations Along Segment II of U.S. 12 . . . . .	IV-16
22	Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12—Segment II . . . . .	IV-18
23	Evaluation of Signalized Intersection Operations Along Segment III of U.S. 12 . . . . .	IV-26
24	Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12—Segment III . . . . .	IV-27
25	Evaluation of Signalized Intersection Operations Along Segment IV of U.S. 12 . . . . .	IV-37
26	Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12—Segment IV . . . . .	IV-39
27	Evaluation of Signalized Intersection Operations Along Segment V of U.S. 12 . . . . .	IV-48
28	Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12—Segment V . . . . .	IV-51
29	Evaluation of Signalized Intersection Operations Along Segment VI of U.S. 12 . . . . .	IV-66
30	Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12—Segment VI . . . . .	IV-69
31	Summary of U.S. 12 Suburban Arterial Analysis . . . . .	IV-80
32	Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12 . . . . .	IV-82

***Table***

***Page***

33 U.S. 12 SRA Implementation Plan . . . . . IV-83

CH247/013.WP5

***U.S. 12 SRA***

**Chapter I**

**Introduction**

## **Chapter I Introduction**

The 2010 Transportation System Development Plan adopted by the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC) recognizes that not all long-distance highway travel can be handled by the expressway system. Realizing that the arterial system will have to carry some long-distance trips, the 2010 Plan designated a system of Strategic Regional Arterials (SRAs) to supplement the expressway system.

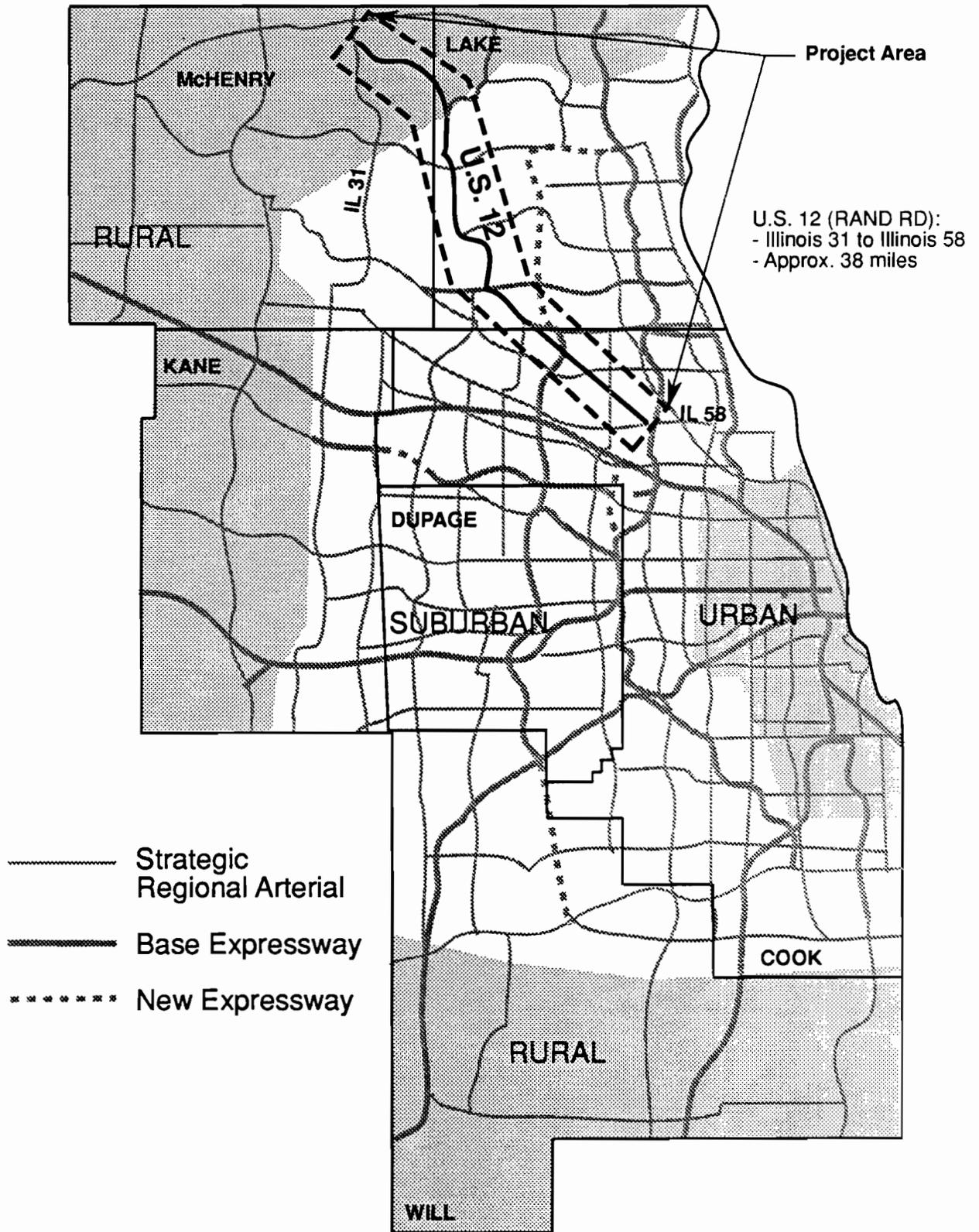
The SRA system is a 1,340-mile network of existing roads in the northeastern Illinois region. They create a network of 66 routes intended to serve as a second tier to the expressway system. The regional highway system, consisting of existing and planned expressways and SRAs, is shown in Exhibit 1.

Identification of routes that comprise the SRA system was determined based upon the projected levels of future travel demand within different parts of the region, with spacing ranging from about 3 miles apart in the more densely developed areas to about 8 miles apart in predominantly rural areas. Within this network, there are significant differences in the roadway environment that determine how various types of routes may function in the system. Three different types of SRA routes have been designated, corresponding to three different types of roadway environment:

- Urban routes
- Suburban routes
- Rural routes

The designation of route types within the overall SRA system reflects the expected density of long-range development within the different portions of the region.

This report is concerned with U.S. 12 (Rand Road), which has been designated a SRA corridor from Illinois 31 to Illinois 58 (Golf Road). The corridor is highlighted in Exhibit 1. The U.S. 12 SRA, which traverses McHenry, Lake, and Cook Counties, has been classified as a rural SRA from Illinois 31 to Illinois 134 (south of Fox Lake), and suburban from the Illinois 134 to Illinois 58.



# ROUTE TYPES ON THE STRATEGIC REGIONAL ARTERIAL SYSTEM

## **SRA Planning Objectives**

The SRA system is intended to accomplish certain specific objectives within the overall regional transportation system:

- Supplement an expanded expressway system by:
  - Improving access to expressways
  - Providing alternatives for some portions of expressway travel
  - Providing a lower-cost substitute for expressways in some corridors
  
- Enhance public transportation and personal mobility by:
  - Improving access to rail transit stations
  - Improving operating conditions for buses and other transit vehicles
  - Identifying opportunities for future transit facilities
  - Maintaining pedestrian accessibility
  
- Accommodate commercial vehicle traffic by:
  - Improving structural clearances
  - Maximizing through traffic movement

## **SRA Design Concept**

A report on design concepts for the SRA system, prepared by Harland Bartholomew & Associates, Inc., was endorsed by the CATS Policy Committee. These concepts have been used as a guide, but not as a policy, in developing the U.S. 12 improvement plan for U.S. 12 described in this report.

### **Organization of the Report**

This report presents a summary of the SRA planning study for the U.S. 12 corridor. It is organized as follows:

- **Existing Conditions (Chapter II)**
  - This section describes the existing physical characteristics, traffic operation, safety, transit operations, environmental concerns, and land uses in the U.S. 12 corridor.
  
- **Planning Framework (Chapter III)**
  - This section describes the framework within which the recommended SRA plan will be situated. The chapter includes a description of route design characteristics, design criteria, travel forecasts, future land use zoning and development, future roadway and transit planning, future areas of concern, and a summary of the roadway recommendations.
  
- **Recommended SRA Plan (Chapter IV)**
  - This section describes the recommended SRA corridor plan including lane arrangements, right-of-way, an arterial operations and level of service summary, intersection capacity planning analysis, construction and right-of-way costs, and a prioritization of recommendations.

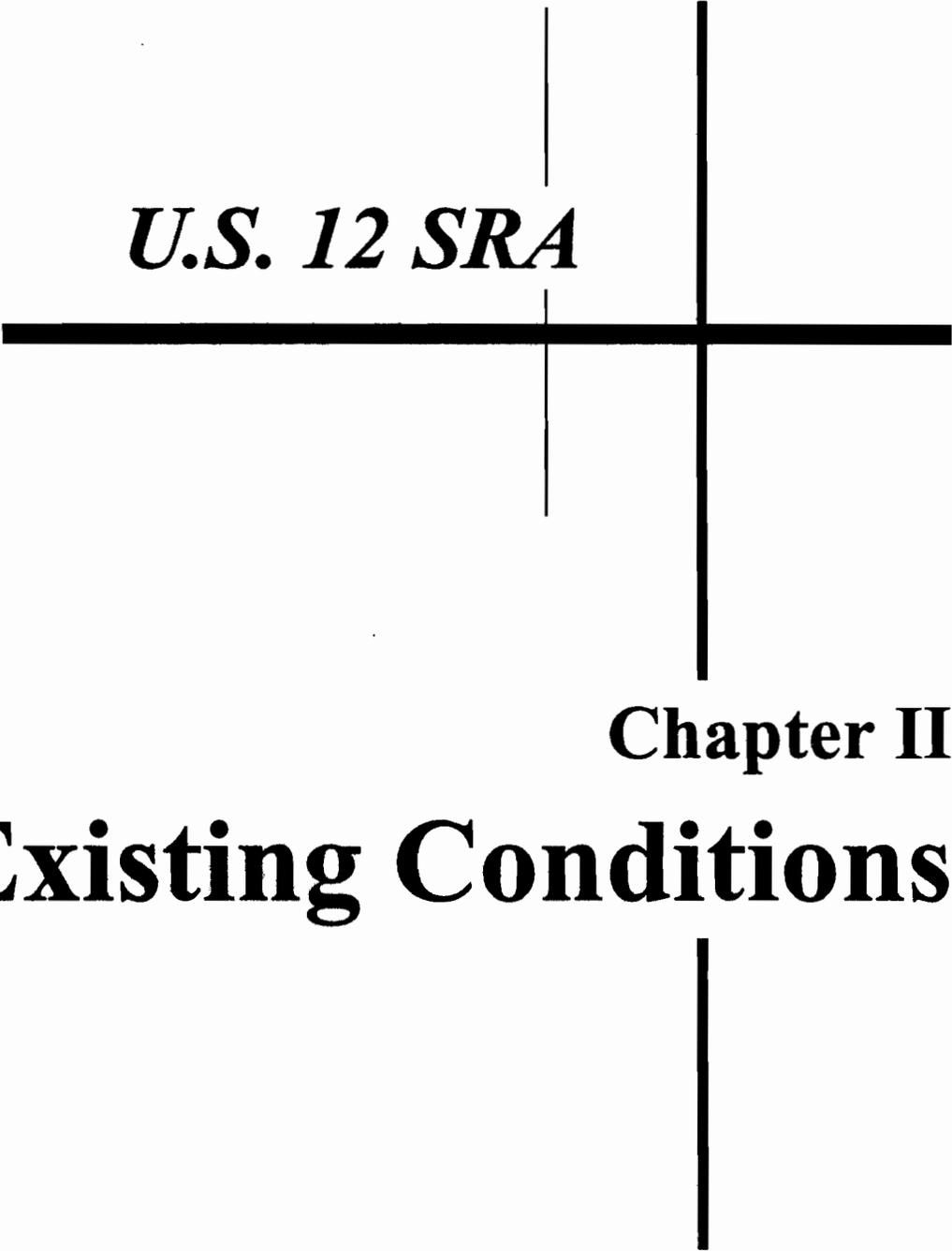
- **Public Involvement (Chapter V)**

- This section documents the public involvement process undertaken for the SRA study of U.S. 12. It is divided into three major sections: Panel Advisory Meetings, Newsletters, and the Public Hearing. These three opportunities for participation allowed the general public or their elected officials to voice opinions concerning U.S. 12.

### **Time Frame**

The SRA study of the U.S. 12 corridor began in May 1991 and has continued to the production of this Final Report in October 1994. Conclusions and recommendations are based on conditions existing during the study period as well as known developments and plans by others that were current at this time.

SRA planning for U.S. 12 involved the Illinois Department of Transportation (IDOT), CATS, and the numerous communities served and/or affected by the route. Input was received through a series of six meetings with a two SRA Advisory Panel, and three Public Hearings held on October 27, November 2, and November 4, 1993, to present the draft recommendations.



*U.S. 12 SRA*

**Chapter II**

**Existing Conditions**

## Chapter II

# Existing Conditions

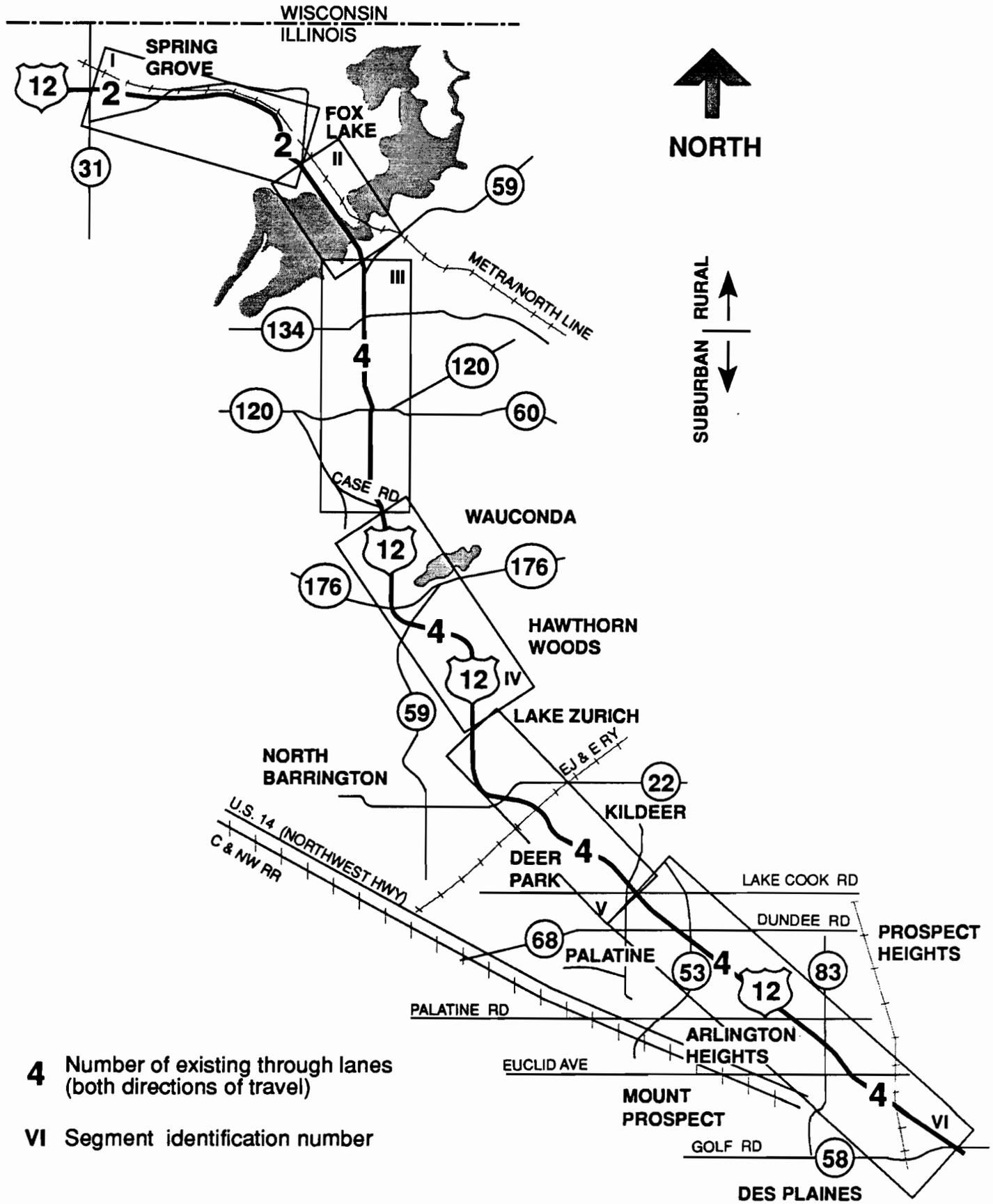
The U.S. 12 SRA corridor study area extends from Illinois 31 southeast to Illinois 58 (Golf Road). The study corridor, approximately 38 miles long, passes through portions of McHenry, Lake, and Cook Counties. As shown in Exhibit 2, the corridor has been divided into six segments for more detailed discussion:

- Segment I—Spring Grove (Illinois 31 to State Park Road)
- Segment II—Fox Lake (State Park Road to Illinois 59)
- Segment III—Lakemoor to Wauconda (Illinois 59 to Bonner Road)
- Segment IV—Wauconda to North Barrington (Bonner Road to Miller Road)
- Segment V—Lake Zurich to Kildeer (Miller Road to Lake-Cook Road)
- Segment VI—Arlington Heights to Des Plaines (Lake-Cook Road to Illinois 58)

U.S. 12 (commonly known as Rand Road) serves as a principal north-south regional arterial between the northwest suburbs of Chicago and southeastern Wisconsin. The regional importance of U.S. 12 is emphasized by its classification as a U.S. Highway, and by its intersections with 10 other SRA-designated arterials: Illinois 31, Illinois 59, Illinois 120, Illinois 176, Illinois 22, Quentin Road, Lake-Cook Road, Palatine Road, Illinois 83 (Elmhurst Road), and Illinois 58. The U.S. 12 corridor is best characterized as a suburban arterial with no access control. The corridor serves long-distance, through trips as well as local, short trips within the cities and villages through which it travels.

Existing physical characteristics, and safety/accident, traffic, transit, and land use data for each of the segments defined above were collected from a number of sources (see Table 1). Additional information and data were gathered through field reconnaissance and investigations, and discussions with state, county, and village officials at the corridor Advisory Panel Meetings. The existing conditions as they relate to traffic operations and

# U.S. 12 ILLINOIS 31 TO ILLINOIS 58 (GOLF ROAD) (APPROX. 38 MILES)



**Table 1**  
**Sources of Data Describing Traffic and Transportation Characteristics of**  
**U.S. 12 in 1991/1992**

<b>Item</b>	<b>Data Source</b>
<b>Traffic Volumes</b> <ul style="list-style-type: none"> <li>• Average Daily Traffic</li> <li>• Intersection Turning Movement Counts</li> <li>• Truck Classification</li> </ul>	<ul style="list-style-type: none"> <li>- 1988 Lake County Traffic Map, 1989 McHenry County Traffic Map, and 1986 Cook County Traffic Map</li> <li>- 1989 Traffic Map, McHenry County</li> <li>- Illinois Department of Transportation, Office of Planning &amp; Programming</li> </ul>
<b>Accidents</b>	- Illinois Department of Transportation, Division of Traffic Safety, Collision Diagram Information (1987, 1988, January to October 1989)
<b>Transit</b> <ul style="list-style-type: none"> <li>• Routes</li> <li>• Ridership</li> </ul>	<ul style="list-style-type: none"> <li>- Regional Transportation Authority</li> <li>- Chicago Transit Authority</li> <li>- Metra</li> <li>- Pace</li> </ul>
<b>Traffic Control</b> <ul style="list-style-type: none"> <li>• Signalized Intersection Locations</li> <li>• Other Traffic Control</li> </ul>	- Field Reconnaissance
<b>Cross Section</b> <ul style="list-style-type: none"> <li>• Lane Widths and Arrangements</li> <li>• Shoulder Widths</li> <li>• Type of Section</li> </ul>	<ul style="list-style-type: none"> <li>- As-Built Plans, Field Reconnaissance</li> <li>- Illinois Department of Transportation, Scope Report OPP—Planning Services Section</li> <li>- Reconnaissance</li> </ul>
<b>Right-of-Way</b>	<ul style="list-style-type: none"> <li>- Illinois Department of Transportation, Scope Report OPP—Planning Services Section</li> <li>- As-Built Plans, Sidwell Maps</li> </ul>
<b>Curb/Roadside Use</b> <ul style="list-style-type: none"> <li>• Parking</li> <li>• Bus and Loading Zones</li> </ul>	- Field Reconnaissance
<b>Structures</b>	- Illinois Department of Transportation, Scope Report OPP—Planning Services Section
<b>Other Features</b>	- Illinois Department of Transportation, Scope Report OPP—Planning Services Section

safety, transit, environmental concerns, and land use are discussed in this chapter for each of the six U.S. 12 segments.

## Corridor Overview

The U.S. 12 corridor combines two- and four-lane roadway. The northern segments of U.S. 12 (north of Fox Lake) consist of a two-lane rural roadway, with no median, aggregate or paved shoulders, and open-ditch drainage on the outside. South from the border of McHenry County and Lake County, the cross section consists of four lanes. The cross section characteristics, however, vary widely. Through Fox Lake, the cross section consists primarily of a five-lane urban section. This cross section transitions to a four-lane rural cross section with an open grass median south of Illinois 59. From Lake Zurich south to Golf Road, the cross section is essentially urban in nature with a closed drainage design and a flush median. There are exceptions, such as between Ela Road and Lake-Cook Road, where the drainage is open.

Right-of-way varies along the corridor from 60 to 300 feet. North of Fox Lake, the right-of-way ranges from 60 to 105 feet; between Fox Lake and Lake Zurich, the right-of-way ranges between 150 and 300 feet. South of Lake-Cook Road, the right-of-way is 100 feet.

The corridor is a fully-accessible facility with a combination of signalized intersections and grade separations. Between Illinois 31 and Illinois 59, signals in Spring Grove and Fox Lake control access. South of Illinois 59 to Lake Zurich, U.S. 12 is free-flow or unstopped. Access to U.S. 12 is controlled by grade-separated interchanges or by stop signs along the crossroad. South from Lake Zurich to Illinois 58, numerous signals and driveways serve commercial and residential uses. There is one interchange at Illinois 53.

On a regional basis, U.S. 12 is the major arterial serving this portion of Illinois. Because U.S. 12 is a diagonal arterial running in a northwest-to-southeast direction, there are no comparable parallel facilities. U.S. 14 (also a SRA), travels roughly parallel to U.S. 12. U.S. 14 diverges from U.S. 12 at Golf Road, where it is approximately ½ mile west to approximately 10 miles to the west at the northern border. A number of nearby lower-class roads parallel U.S. 12, but none has the necessary continuity or functional classification to serve as an alternate route for the regional trips that U.S. 12 is intended to serve.

Table 2 summarizes existing traffic demand in terms of average daily traffic (ADT) counts from 1986 to 1989. For the section of U.S. 12 under study, ADT ranges from 7,400 to 36,400 vehicles per day (vpd). The lowest ADT along the corridor is north of Fox Lake, where the ADT ranges from 7,000 to 8,000 vpd. The highest traffic volumes occur through the major communities which U.S. 12 passes. The traffic volume increases as the corridor travels south, with ADT rising to more than 20,000 vpd north of Lake Zurich. As the corridor enters Lake Zurich, traffic volume increases to more than 30,000 vpd. The highest volumes (between 30,300 and 36,400 vpd) occur south of Lake-Cook Road. This area is highly developed and includes numerous shopping centers and dense residential areas.

Location	ADT (vpd)
Illinois 31 to Johnsburg Wilmot Road	7,400 - 10,000
Johnsburg Wilmot Road to Molidor Road	14,400 - 21,300
Molidor Road to Bonner Road	13,700 - 21,000
Bonner Road to Miller Road	26,000 - 28,800
Miller Road to Illinois 53	30,000 - 36,400
Illinois 53 to Illinois 83	24,300 - 33,200

Under current traffic conditions, peak period congestion is evident along some segments of U.S. 12, particularly in the highly-developed areas south of Illinois 22 to Illinois 58 (Golf Road). This area includes the Randhurst shopping areas and the commercial areas from south of Palatine Road to north of Arlington Heights Road. Through Fox Lake, seasonal and recreational traffic is particularly heavy, degrading traffic operations through the Fox Lake region. In addition, closely-spaced signalized intersections and frequent access and driveway points adversely affect traffic operation along U.S. 12 in a number of segments.

Table 3 lists other transportation facilities that cross or are adjacent to U.S. 12. The principal transit line that serves regional trips in the U.S. 12 corridor is the Metra/Milwaukee North rail line. This facility operates parallel to U.S. 12 in Fox Lake, where it diverges as it travels southeast to downtown Chicago. Three freight lines serve

**Table 3  
Existing Transit Facilities and Rail Operation Along U.S. 12**

Facility	Frequency	Location of Rail or Bus Route	Average Weekday Boardings <sup>1</sup>
<b>Metra Lines and Nearest Stations</b>			
Milwaukee District/ North Line Fox Lake Station	Weekday: 17 inbound, 17 outbound Saturday: 9 inbound, 9 outbound Sunday: 7 inbound, 7 outbound	Nippersink Boulevard at Grand Avenue	433
Milwaukee District/ North Line Ingleside Station	Weekday: 11 inbound, 14 outbound Saturday: 9 inbound, 9 outbound Sunday: 7 inbound, 7 outbound	Washington Street and Rollins Road	48
Milwaukee District/ North Line Long Lake Station	Weekday: 14 inbound, 16 outbound Saturday: 9 inbound, 9 outbound Sunday: 7 inbound, 7 outbound	Decorah Avenue and Route 134	93
Chicago and Northwestern/ Northwest Line Barrington Station	Weekday: 29 inbound, 31 outbound Saturday: 14 inbound, 13 outbound Sunday: 7 inbound, 8 outbound	201 S. Spring Street	1,748
Chicago and Northwestern/ Northwest Line Palatine Station	Weekday: 24 inbound, 27 outbound Saturday: 14 inbound, 12 outbound Sunday: 7 inbound, 8 outbound	225 W. Colfax (at Smith Street)	2,010
Chicago and Northwestern/ Northwest Line Arlington Park Station	Weekday: 26 inbound, 28 outbound Saturday: 14 inbound, 13 outbound Sunday: 7 inbound, 8 outbound	2121 W. Northwest Highway	1,829
Chicago and Northwestern/ Northwest Line Arlington Heights Station	Weekday: 25 inbound, 27 outbound Saturday: 14 inbound, 13 outbound Sunday: 7 inbound, 8 outbound	19 E. Northwest Highway	3,129
Chicago and Northwestern/ Northwest Line Mount Prospect Station	Weekday: 23 inbound, 26 outbound Saturday: 14 inbound, 12 outbound Sunday: 7 inbound, 8 outbound	13 E. Northwest Highway (at Main Street)	2,073
Chicago and Northwestern/ Northwest Line Cumberland Station	Weekday: 21 inbound, 23 outbound Saturday: 13 inbound, 12 outbound Sunday: 7 inbound, 8 outbound	475 N. Northwest Highway	537
Chicago and Northwestern/ Northwest Line Des Plaines Station	Weekday: 26 inbound, 25 outbound Saturday: 13 inbound, 12 outbound Sunday: 7 inbound, 8 outbound	1501 Miner Street (at Lee Street)	1,146
<b>Pace Bus Routes</b>			
Pace 806	Weekday: 6 northwestbound, 5 southeastbound No Saturday, Sunday, or holiday service	Uses corridor between Fox Lake Road and Illinois 132 (Grand Avenue)	N/A
Pace 726	Weekday: 2 eastbound, 2 southbound 3 northbound, 3 westbound, No Saturday, Sunday, or holiday service	Crosses on Illinois 176 (Wauconda Road- Liberty Street) and on Illinois 59 (Barrington Road)	50
Pace 728	Weekday: 1 northbound, 1 southbound No Saturday, Sunday, or holiday service	Crosses on Ela Road (Dundee Road)	56 <sup>2</sup>
Pace 725	Weekday: 2 northbound, 3 southbound No Saturday, Sunday, or holiday service	Uses corridor between Illinois 22 and Miller Road	56 <sup>2</sup>

**Table 3  
Existing Transit Facilities and Rail Operation Along U.S. 12**

Facility	Frequency	Location of Rail or Bus Route	Average Weekday Boardings <sup>1</sup>
Pace 725	Weekday: 3 northwestbound, 3 southeastbound No Saturday, Sunday, or holiday service	Uses corridor between Old Rand and Cuba Roads	56 <sup>2</sup>
Pace 699	Weekday: 14 eastbound, 15 southeastbound No Saturday, Sunday, or holiday service	Crosses on Dundee Road; Uses corridor between Old Hicks and Dundee Roads	367
Pace 723	Weekday: 3 northbound, 3 southbound No Saturday, Sunday, or holiday service	Terminates at corridor on Baldwin Road	74
Pace 698	Weekday: 3 northwestbound, 4 southeastbound No Saturday, Sunday, or holiday service	Uses corridor between Kennicott Avenue and Chestnut Avenue	46
Pace 690	Weekday: 19 northbound, 19 southbound No Saturday, Sunday, or holiday service	Crosses on Arlington Heights Road	381
Pace 234	Weekday: 18 northbound, 19 southbound, 18 eastbound, 17 westbound Saturday: 10 northbound, 10 southbound, 10 eastbound, 10 westbound No Sunday or holiday service	Crosses on Illinois 83 (Elmhurst Road) and Illinois 58 (Golf Road)	545
Pace 696	Weekday: 17 eastbound, 18 westbound No Saturday, Sunday, or holiday service	Crosses on Kensington Road and Illinois 83 (Elmhurst Road)	461
Pace 221	Weekday: 10-12 northwestbound, 12 northbound, 10 southbound No Saturday, Sunday, or holiday service	Uses corridor northwestbound between Wolf Road and Business Center Drive; Crosses on Wolf Road	967
<b>Other Rail Lines</b>			
Elgin, Joliet, and Eastern Railroad	1 freight train per day	Crosses in Lake Zurich, just east of Ela Road	N/A
Wisconsin Central Railroad (Formerly Soo Line)	10 to 12 freight trains per day	Crosses in Des Plaines, 1 block north of Illinois 58 (Golf Road)	N/A
Sources: Metra and Pace, "Future Agenda for Suburban Transportation" (April 1992). Pace, "Quarterly Route Review: January- March, 1992" (June 1992). Metra and Pace, Individual line/route timetables. EJ&E Railroad, Joliet, Illinois. Wisconsin Central Railroad, Stevens Point, Wisconsin.			

<sup>1</sup>For Pace buses, this column represents "Average Weekday Ridership."

<sup>2</sup>Combined ridership totals are listed for Pace 725 and 728.

the corridor, including the Chicago, Milwaukee, St. Paul, and Pacific (CMStP&P) Railroad north of Fox Lake, paralleling U.S. 12 north to Illinois 31. The Elgin, Joliet, and Eastern (EJ&E) Railway crosses U.S. 12 south of Ela Road in Lake Zurich and the Soo Line Railroad crosses U.S. 12 north of Illinois 58 in Des Plaines. Pace suburban buses serve the corridor with three routes that travel along portions of U.S. 12: Pace Routes 723, 725, and 806. Other Pace routes that cross portions of the U.S. 12 corridor are Pace 234, 690, 698, 726, and 728.

Several existing physical, geometric, and environmental concerns exist along U.S. 12. Limited right-of-way is a concern in a number of locations. In the northern portions of the corridor, right-of-way along U.S. 12 is limited by environmentally sensitive areas, including portions of the Nippersink Creek and the McHenry Conservation District.

In addition, steep terrain and the presence of railroad facilities restrict available right-of-way along some segments north of Fox Lake. In Fox Lake and areas south of Lake-Cook Road, available right-of-way is limited by the proximity of development to the existing right-of-way. In less developed areas, limited right-of-way may only be a concern on one side of the roadway as a result of a specific land use, floodplains/floodways, or another environmental constraint. Other environmental concerns along U.S. 12 include stream crossings; parks and park district property; wetlands; floodplains/floodways; cemeteries; leaking underground storage tank (LUST) sites; and Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites. Sources for these data are listed in Table 4.

### **Current Planning, Design, and Construction Activity**

There are only a few current planning, design, and construction activities that have a direct bearing on U.S. 12. These activities, because of their current status, were considered “existing conditions” for the U.S. 12 SRA study. These projects include all projects identified in the *IDOT Fiscal Year 1993-1997 Proposed Highway Improvement Program*. The most notable project is the planned reconstruction and relocation of Illinois 120 south of its present location. These projects were taken into account in the recommended plan presented in Chapter IV.

**Table 4**  
**Sources of Environmental and Land Use Data Along U.S. 12**

<b>Item</b>	<b>Data Source</b>
<b>Parkland and Other Open Space</b>	<p>Listing of Land and Water Conservation Fund (LAWCON) Projects; U.S. Department of the Interior, National Park Service</p> <p>1985 Bikeways Plan; Northeastern Illinois Planning Commission</p> <p>Illinois Natural Areas Inventory; Illinois Department of Transportation, District 1, Project and Environmental Studies</p> <p>Illinois Nature Preserves System 1987-1988 Report and 1990 Update; Illinois Nature Preserves Commission</p> <p>Northeastern Illinois Regional Greenways Plan; Northeastern Illinois Planning Commission, 1992</p> <p>Lake County Forest Preserve Maps</p> <p>McHenry Conservation District Maps</p> <p>Forest Preserve District of Cook County</p> <p>Visual Survey 2/93</p>
<b>Wetlands</b>	<p>National Wetlands Inventory Map; U.S. Department of the Interior, U.S. Fish and Wildlife Service</p> <p>Lake County Advanced Identification Wetlands Map (ADID)</p>
<b>Floodplains</b>	<p>FIRM, Flood Insurance Rate Map; Federal Emergency Management Agency</p> <p>FLOODWAY, Flood Boundary and Floodway Map; U.S. Department of Housing and Urban Development</p>
<b>Hazardous Materials</b>	<p>Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) Listing, 4/92; U.S. EPA Superfund Program</p> <p>Leaking Underground Storage Tank (LUST) Listing, 12/91; Illinois Environmental Protection Agency</p>
<b>Historic Sites</b>	<p>The National Register of Historic Places, 1990; U.S. Department of the Interior</p> <p>Illinois State Historical Markers Text Book, 1973; Illinois Historic Structures Survey</p> <p>Inventory of Historic Structures and Historic Landmarks, 1973; Illinois Historic Structures Survey</p>

## Detailed Summary of U.S. 12 by Segment Definitions

The existing physical characteristics, traffic operations, safety, public transportation, environmental concerns, and land use for the six segments defined along U.S. 12 are discussed below.

### **Segment I——“Spring Grove” (Illinois 31 to State Park Road)**

Segment I, the northern segment of U.S. 12, is approximately 7 miles long. It extends southeasterly from Illinois 31 (just south of Richmond) to State Park Road. This segment is rural in nature and encompasses the communities of Solon Mills, Spring Grove, and portions of unincorporated McHenry County.

#### *Physical Characteristics*

The cross section along this segment of U.S. 12 consists of two lanes (one lane in each direction of travel). The cross section is generally rural in nature with an open drainage system and paved or aggregate outside shoulders. No median is present along most of this segment. Two sections, however, exist where a 12-foot flush median is present: between Sherwood Forest Drive and Richardson Road, and between Johnsbury Wilmot Road and Sunset Road (see Exhibits A-1 through A-3).

The horizontal alignment is composed of mild horizontal curves no greater than 4 degrees, and tangent sections. The horizontal design speed of this segment exceeds 60 miles per hour (mph). The vertical alignment is characterized as level to rolling.

The right-of-way within Segment I varies from 80 to 110 feet, although it is 80 feet along most segments. Right-of-way is particularly constrained in two locations. At the first location, south of North Solon Road, wetlands and the Nippersink Creek limit right-of-way. At the second location, between Sunset Road and State Park Road, the right-of-way is limited as a result of the McHenry Conservation District property, the Nippersink Creek, wetlands, and steep terrain.

Other physical characteristics worth noting in this segment include four structures that carry U.S. 12 over the Nippersink Creek (see Table 5), and one major drainage structure. In addition, the CMStP&P Railroad parallels U.S. 12 between Kuhn Road and North Solon Road, and between Richardson Road and Johnsbury Wilmot Road.

<b>Table 5</b> <b>Existing Structures Along Segment I</b> <b>(Illinois 31 to State Park Road) of U.S. 12</b>			
Structure	IDOT Structure Reference	Feature	
		Over	Under
Bridge	056-0018	Nippersink Creek	—
Bridge	056-0019	Nippersink Creek	—
Bridge	056-0020	Drainage Ditch	—
Bridge	056-0021	Nippersink Creek	—

### *Traffic Control, Operations, and Safety*

Major intersections within Segment I are limited, and include intersections with Illinois 31, Winn Road, and Johnsbury Wilmot Road. All three of these intersections are signal controlled with left-turn protection provided along U.S. 12. Illinois 31 is a designated north-south SRA south from the Wisconsin-Illinois border.

Throughout this segment, traffic operates at a high level of service with minimal congestion and desirable operating speeds. Through Spring Grove, the most developed area of this segment, peak period congestion at the signal with Winn Road is well within acceptable limits. Traffic congestion along this segment is greatest not during the typical morning and evening peak periods, but during the weekends when recreational traffic is at its peak. Parking is prohibited along U.S. 12 within this segment. The posted speed limit along this segment ranges between 45 and 55 mph. North of North Solon Road the speed limit is 55 mph, and south of North Solon Road the speed limit is between 45 and 50 mph.

Existing traffic demand within this segment, based on the 1989 McHenry ADT Map (see Exhibits A-1 through A-4), ranges from 7,400 to 8,800 vpd. Traffic volumes increase moderately through Spring Grove and as the corridor approaches Fox Lake. The capacity of the existing two-lane cross section accommodates current traffic demand.

Accident data were obtained from IDOT accident summaries for the years of 1987 through 1989. Segment accident rates were calculated along U.S. 12 in accidents per million vehicle miles (MVM). Intersection accident rates, in accidents per million entering vehicles (MEV), also were calculated at selected intersections for which data were available. Intersection accident rates of 1.59 and 3.37 accidents per MEV were calculated at Illinois 31 and Johnsburg Wilmot Road. Calculated segment accident rates ranged from 1.97 to 4.63 accidents per MVM. These rates are roughly average to below average compared to statewide accident statistics.

### ***Public Transportation***

There are no other public transportation facilities that operate in this segment. Pace bus service, Metra, and Chicago and Northwestern (C&NW) railroads do not serve the corridor north of Fox Lake. The rail line that parallels U.S. 12 along certain segments serves freight, and not commuter/public passengers.

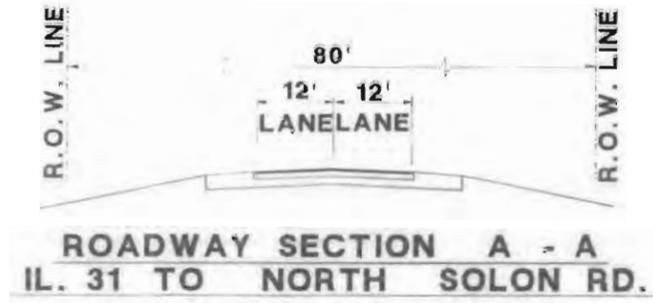
### ***Environmental Constraints and Land Use***

There are a number of environmental constraints along this segment of U.S. 12 (see Table 6 and Exhibits B-1 through B-3). Included along this segment are two crossings of the Nippersink Creek. U.S. 12 also travels parallel to the McHenry Conservation District between Sunset Road and Fox Lake Road. A number of wetlands also have been identified, most notably the wetlands north of Spring Grove along the west side of U.S. 12, and north of Sunset Road along the east side of U.S. 12. Although a CERCLIS site was identified north of Winn Road, it is far enough from the corridor and represents no concern. In addition, there are a number of sections along U.S. 12 that lie within or adjacent to existing floodplains. These areas include U.S. 12 crossings over the Nippersink Creek, an area just north of Johnsburg Wilmot Road and areas adjacent to the McHenry Conservation District.

The land use north of Spring Grove consists mostly of open space and areas that are undevelopable/environmentally sensitive areas. Within Solon Mills and Spring Grove, the land use adjacent to U.S. 12 is comprised of industrial and commercial uses. Outside of these areas, the land use is primarily residential. No schools, churches, or other potentially sensitive land uses adjacent to this segment of U.S. 12 were noted.

<p align="center"><b>Table 6</b>  <b>Summary of Environmentally Sensitive Land Uses and Sites</b>  <b>Along Segment I of U.S. 12</b></p>			
<b>Item</b>	<b>Exhibit No.</b>	<b>Reference</b>	<b>Description</b>
Historic Sites			None noted
CERCLIS Sites	B-2	1	Intermatic Inc., NWC of Route 12 and Winn Rd., Spring Grove
LUST Sites			None noted

LEGEND	
△	SIGNALIZED INTERSECTION
→	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF ROAD USE EAST WEST

2,200	7,400	8,800
1.59/MEV	4.46 / MVM	
	METRA RAIL NONE	
	PACE BUS NONE	
	(P)	
	(P)	

**U.S. 12 EXISTING CONDITIONS**

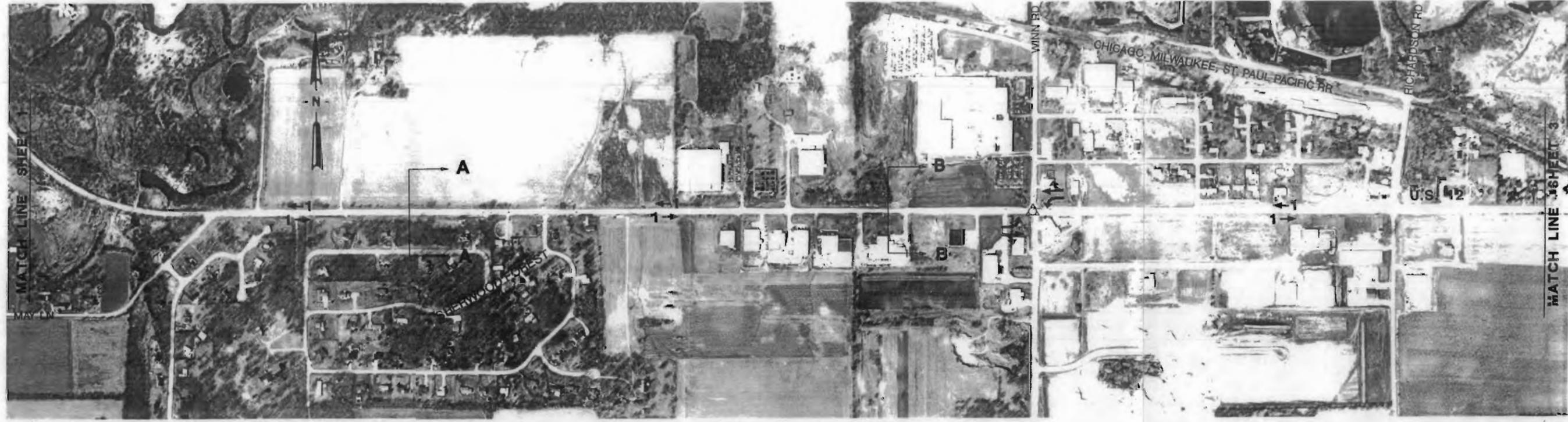
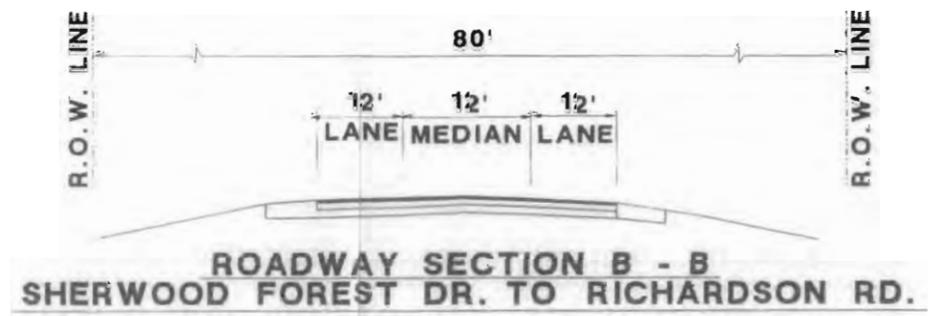
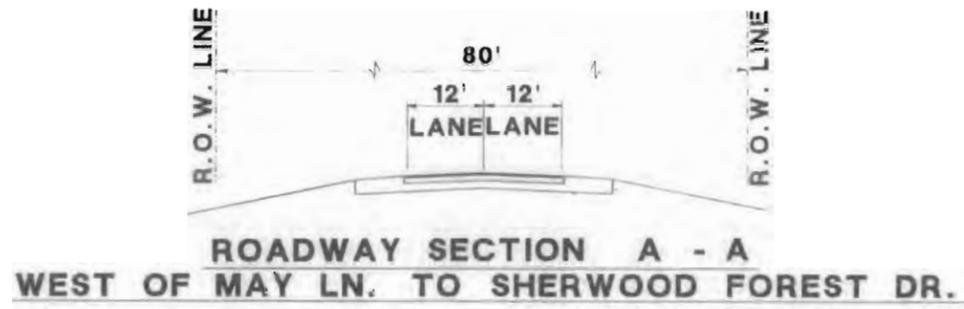
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- B DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

8,800	8,000	7,500
1.97 / MYM	2.46 / MYM	2.83 / MYM
	METRA RAIL NONE	
	PACE BUS NONE	
(P)	(P)	(P)
(P)	(P)	(P)

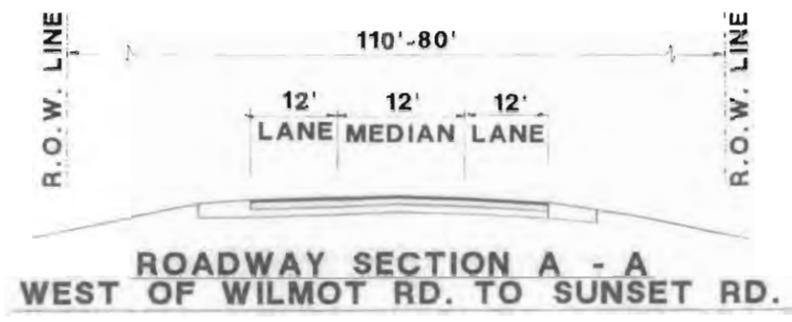
**U.S. 12 EXISTING CONDITIONS**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION



**LEGEND**

△	SIGNALIZED INTERSECTION
→	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

7,500	8,400
3.98 / MVM	4.63 / MVM
3.37/MEV	
METRA RAIL NONE	
PACE BUS NONE	
NR	NR
NR	NR

**U.S. 12 EXISTING CONDITIONS**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT A-3



# PLANNING FOCUS AREAS

## A) IL 31 INTERSECTION

- Intersection of two SRA routes

## B) KUHN ROAD INTERSECTION

- At-grade railroad crossing in close proximity to at-grade intersection may affect intersection operations
- Skewed intersection geometry
- Floodplain adjacent to U.S. 12

## C) NORTH SOLON ROAD AND EAST SOLON ROAD INTERSECTIONS

- Closely-spaced intersections and intersection geometry may affect intersection operations

## D) U.S. 12 OVER NIPPERSINK CREEK

- Limited horizontal clearance over Nippersink Creek

## E) SOUTH OF EAST SOLON ROAD TO IL 31

- Limited available right-of-way
- Various wetlands adjacent to either side of the corridor may limit improvement alternatives
- Floodplain adjacent to U.S. 12



RURAL SRA -- 186' TO 210' RIGHT OF WAY (DESIRABLE)

### LEGEND

- A Planning Focus Area ID
- (G) Hazardous Waste Site
- L Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- /// Floodplain/Floodway
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-1

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale: 0 200 400 600 800 feet

# PLANNING FOCUS AREAS

## A) NORTH OF MAY LANE

- Wetlands adjacent to both sides of the corridor may limit improvement alternatives
- Floodplain adjacent to U.S. 12

## B) SOUTH OF RICHARDSON ROAD TO NORTH OF MAY LANE

- Limited available right-of-way
- Multiple driveway access points and offset intersections may affect SRA operation



RURAL SRA -- 186' TO 210' RIGHT OF WAY (DESIRABLE)

### LEGEND

A	Planning Focus Area (A)
Ⓒ1	Hazardous Waste Site
U	Leaking Underground Storage Tank
H1	Historic Building/District
*	Wetland
†	Church/Synagogue/Religious Institution
—	Agricultural Land
—	Special Use Areas
—□—□—	Major Utility Lines
///	Floodplain/Floodway

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-2

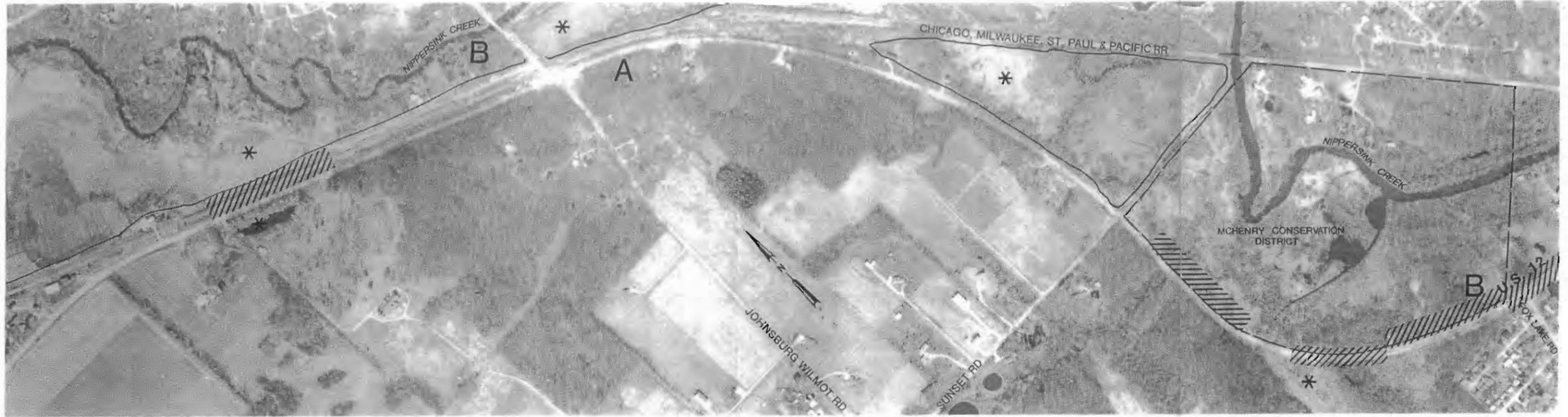
# PLANNING FOCUS AREAS

## A) WILMOT ROAD INTERSECTION

- At-grade railroad crossing in close proximity to at grade intersection may affect intersection operations

## B) NORTH OF FOX LAKE TO NORTH OF WILMOT ROAD

- McHenry Conservation District and wetlands may limit improvement alternatives
- Limited available right-of-way
- Floodplain adjacent to U.S. 12



RURAL SRA -- 186' TO 210' RIGHT OF WAY (DESIRABLE)

### LEGEND

- A Planning Focus Area ID
- ⚠ Hazardous Waste Site
- ⚠ Leaking Underground Storage Tank
- Ⓜ Historic Building/District
- \* Wetland
- ⛪ Church/Synagogue/Religious Institution
- ⬆ Agricultural Land
- ⬆ Special Use Areas
- ⬆ Major Utility Lines
- /// Floodplain/Floodway

U.S. 12

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-3

## **Segment II——“Fox Lake” (State Park Road to Illinois 59)**

Segment II is approximately 3 miles long, extending southeast from State Park Road to Illinois 59. This segment has been defined to encompass the Fox Lake area.

### ***Physical Characteristics***

The cross section along this segment of U.S. 12 consists of a five-lane urban section (two lanes in each direction of travel). The two directions of travel are separated by a 10- to 12-foot flush median, which operates as a two-way, left-turn lane through Fox Lake. At the southern end of this segment, in the vicinity of Kings Drive, two-way frontage roads that extend north and south of Illinois 59 are provided parallel to both sides of U.S. 12. The horizontal alignment of this segment consists of horizontal curves ranging from 1 to 6 degrees and tangent segments. The vertical alignment is characterized as level.

The right-of-way within the segment varies from 64 feet to more than 300 feet. The narrowest right-of-way (64 feet) occurs over Nippersink/Pistakee Lake along the U.S. 12 bridge. Through Fox Lake, the existing right-of-way is 80 feet. Existing development activity adjacent to the corridor limits the availability of right-of-way. To the south, to accommodate the frontage roads, the right-of-way increases to more than 300 feet.

There are several other physical characteristics worth noting in this segment. U.S. 12 crosses over Nippersink/Pistakee Lake on a bridge designed to accommodate four through lanes and a flush median. In addition, a grade separation is provided to accommodate the southbound Illinois 59 entrance ramp to U.S. 12. Additional physical characteristics include the CMStP&P railroad, which parallels U.S. 12 from State Park Road to Oak Street. Table 7 lists existing structures along Segment II. Existing conditions along this segment of U.S. 12 are summarized in Exhibits A-4 and A-5.

Table 7 Existing Structures Along Segment II (State Park Road to Illinois 134) of U.S. 12			
Structure	IDOT Structure Reference	Feature	
		Over	Under
Bridge	049-0018	Nippersink Lake Channel	—
Bridge	049-0019	Pistakee Lake Channel	—
Bridge	049-0020	Illinois 59 (SB)	—

### *Traffic Control, Operations, and Safety*

There are a limited number of major intersections within Segment II. Signalized intersections along U.S. 12 occur at Grand Avenue and Sayton Road, which represent the two main intersections within Fox Lake. Left-turn lanes and left-turn signal phasing is provided at these two locations. Through Fox Lake, the flush median provides continuous left-turn protection for vehicles entering development along the route. At the southern end of the segment, U.S. 12 intersects with Illinois 59. This intersection is served by an interchange from Illinois 59 (north) to U.S. 12 to the south. All other intersections along this route are stop controlled on the cross road only.

Traffic operations through this area vary. In Fox Lake, the segment can become congested during the morning and evening peak periods, but still operates within capacity. During peak recreation season, the Fox Lake area can become congested heavily with local and tourist traffic. This congestion is exacerbated by the number of recreation vehicles, vehicles towing boats, and other recreational activity. Frequent driveways/access points along U.S. 12 are additional factors that affect the operation of U.S. 12 through Fox Lake. Some intersections with substandard sight distance and geometry have been identified. This includes the stop-controlled intersection with Oak Street. The posted speed limit along this segment ranges from 35 to 50 mph. The speed

to the north is posted at 45 mph, and decreases to 35 mph in the developed area of Fox Lake. South of Fox Lake, the speed limit increases to 50 mph.

Existing traffic demand within this segment is based on the 1988 Lake County Traffic Map (see Exhibits A-4 and A-5). ADT along this segment ranges from 16,900 to 20,500 vpd. The highest ADT, reported between State Park Road and Grand Avenue, results from the magnitude and density of development activity along this stretch of roadway. North and south of this segment, the ADT begins to decrease. As mentioned above, ADT during peak recreation season would be higher.

Accident data (see Exhibits A-4 and A-5) were obtained for 1987, 1988, and 1989. Because intersection accident data were unavailable for intersections along this segment of U.S. 12, intersection rates were not calculated. A segment accident rate of 5.35 accidents per MVM was calculated along U.S. 12 between State Park Road and Grand Avenue. Segment rates were not calculated along U.S. 12 from Grand Avenue to the south because recent reconstruction of the cross section renders accident data for 1987 to 1989 meaningless.

### ***Public Transportation***

The Metra/Milwaukee commuter rail line is another major transportation facility operating in this corridor (see Table 3). This railroad runs roughly parallel to U.S. 12 through Fox Lake. South of Fox Lake, the railroad diverges from U.S. 12. An existing train station located in Fox Lake serves the community and surrounding areas. Pace route 806 operates along U.S. 12 between Fox Lake Road and Grand Avenue, serving the Fox Lake Metra stop. Pace route 806 operates at a frequency of one bus per hour.

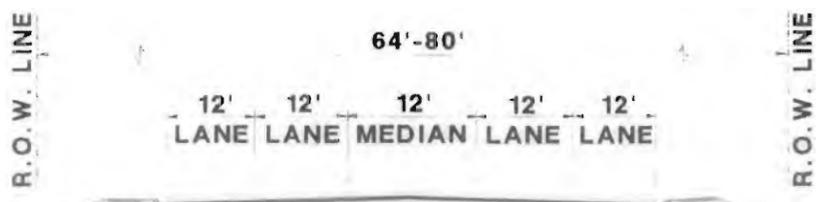
### ***Environmental Constraints and Land Use***

The environmental concerns within this segment are summarized on the Planning Focus Area Exhibits (Exhibits B-4 and B-5). There are few environmental concerns along this segment of U.S. 12. Concerns are focused on potential impacts to the waterways that serve the Fox Lake area, which includes the U.S. 12 crossing of Nippersink/Pistakee Lake. Wetlands also have been identified in the vicinity of Kings Drive, east and west of

U.S. 12. One section of U.S. 12 adjacent to the existing floodplain has been identified south of State Park Ride. No historic, CERCLIS, or LUST sites have been identified along Segment II.

Land use north of the Fox Lake bridge consists of residential and environmentally sensitive areas. South of the Fox Lake bridge to Kings Drive, land use adjacent to the corridor is commercial with residential areas located off the corridor.

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



**ROADWAY SECTION A - A  
FOX LAKE RD. TO SAYTON RD.**



**1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC**

14,400

20,500

16,900

**ACCIDENT  
RATE**

4.63 / MVM

5.35 / MVM

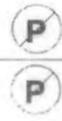
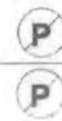
NOT AVAILABLE

**TRANSIT  
ROUTES**

METRA RAIL NONE  
PACE BUS ROUTE 806 (1 PEAK BUS/HOUR)

**EDGE OF  
ROAD USE**

EAST  
WEST



**U.S. 12 EXISTING CONDITIONS**

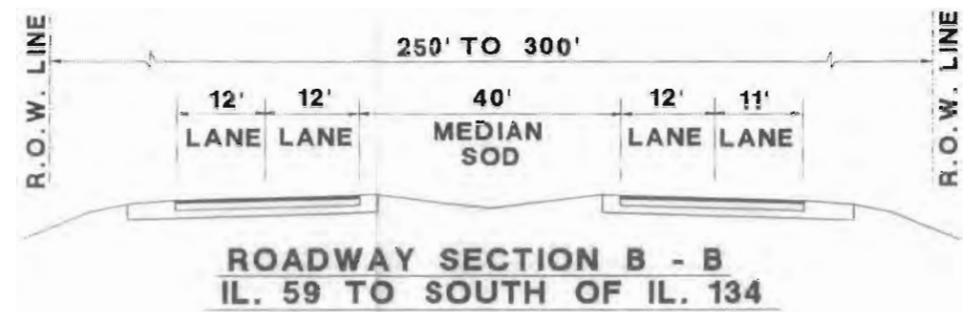
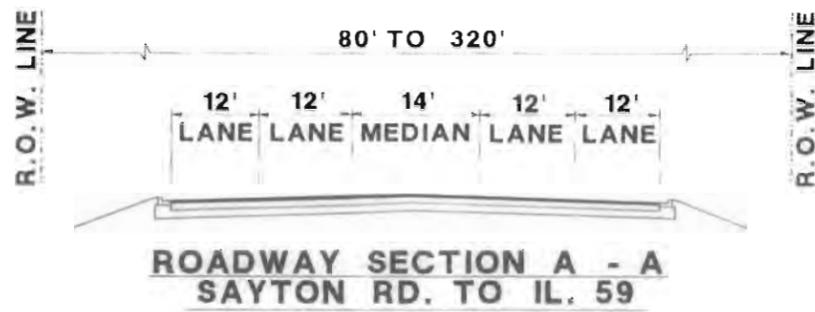
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

**ILLINOIS DEPARTMENT OF TRANSPORTATION**

**SRA** Strategic Regional Arterial Planning Study EXHIBIT A-4



LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	16,900	21,300	19,200
METRA RIDERSHIP	15,337		
		PACE BUS NONE	
EAST	P	P	P
WEST	P	P	P

**U.S. 12 EXISTING CONDITIONS**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

# PLANNING FOCUS AREAS

**A) U.S. 12 BRIDGE OVER PISTAKEE/NIPPERSINK LAKES AND NIPPERSINK CREEK**

- Limited horizontal clearance on bridge

**B) OAK STREET, LAKE VISTA DRIVE, AND STATE PARK ROAD INTERSECTIONS**

- At-grade railroad crossing in close proximity to at-grade intersection may affect intersection operations
- Floodplain adjacent to U.S. 12

**C) GRAND AVENUE INTERSECTION**

- Limited guide signing to METRA Station

**D) SAYTON ROAD TO NORTH OF FOX LAKE ROAD**

- Limited available right-of-way
- Multiple driveway access points and offset intersections affect SRA operation



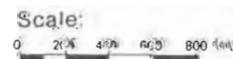
RURAL SRA -- 186' TO 210' RIGHT OF WAY (DESIRABLE)

LEGEND	
A	Planning Focus Area 1B
☠	Hazardous Waste Site
⚠	Leaking Underground Storage Tank
Ⓜ	Historic Building/District
*	Wetland
///	Floodplain/Floodway
✠	Church/Synagogue/Religious Institution
—	Agricultural Land
—	Special Use Areas
—	Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-4

# PLANNING FOCUS AREAS

## A) SOUTH OF KINGS DRIVE TO NORTH OF SAYTON ROAD

- Limited available right-of-way
- Multiple driveway access points and offset intersections may affect SRA operation

## C) SOUTH OF IL 134 (LONG LAKE ROAD)

- Potential high pedestrian activity across U.S. 12 associated with school and future shopping center

## B) IL 59 INTERCHANGE

- Interchange of two SRA routes



RURAL SRA -- 186' TO 210' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area A, B, C
- (CT) Hazardous Waste Site
- L1 Leaking Underground Storage Tank
- (H) Historic Building/District
- \*
 Wetland
- †    ⬠
 Church/Synagogue/Religious Institution
- 
 Agricultural Land
- 
 Special Use Areas
- 
 Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-5

### **Segment III—“Lakemoor to Wauconda” (Illinois 59 to Bonner Road)**

Segment III of the U.S. 12 SRA is approximately 6.3 miles long, extending from Illinois 59 to the north to Bonner Road to the south. This segment travels through Lakemoor, portions of Wauconda, and areas of unincorporated Lake County. Segment III is located in Lake County.

#### ***Physical Characteristics***

The existing cross section within this segment is fairly consistent. The cross section can be characterized as a four-lane (two lanes in each direction) divided rural facility. A continuous, 40-foot open ditch median separates northbound and southbound lanes of U.S. 12. The outer roadside design consists of paved or aggregate shoulders. Outside drainage is accommodated with open ditches. Between Illinois 59 and Illinois 134, continuous two-way frontage roads are provided parallel to both sides of U.S. 12. Frontage roads also are employed south of Illinois 134 to Brandenburg Road, although they are not continuous. Exhibits A-5 to A-8 illustrate the existing conditions of U.S. 12 Segment III.

The horizontal alignment throughout this section comprises mild horizontal curves (less than or equal to 2 degrees) with long tangents. Exceptions occur north of Illinois 120, where the horizontal curvature of U.S. 12 is 5 degrees. Horizontally, the design speed is controlled by this curve, which has a design speed greater than 50 mph. The vertical alignment along this segment is rolling.

The right-of-way within Segment III varies from 100 to 300 feet. North of Illinois 134, the right-of-way is 250 feet. Right-of-way increases to 300 feet south of Illinois 134 to accommodate the frontage roads. South of Brandenburg Road, right-of-way decreases to 250 feet, a dimension it retains until just north of Illinois 120. Between Illinois 120 and Gilmore Road, right-of-way is roughly 100 feet. South of Gilmore Road south to Bonner Road, the right-of-way remains constant at 200 feet.

Another physical characteristic worth noting in this segment is the U.S. 12 structure over Fish Creek (see Table 8). There are no other structures in this segment.

<b>Table 8</b> <b>Existing Structures Along Segment III</b> <b>(Illinois 134 to Bonner Road) of U.S. 12</b>			
Structure	IDOT Structure Reference	Feature	
		Over	Under
Bridge	049-0021	Fish Creek	—

### ***Traffic Control, Operations, and Safety***

There are only three signalized intersections along U.S. 12 in this segment. Major intersections, from north to south, include Illinois 134 and Illinois 120. Illinois 134 (Big Hollow Road) is a continuous east-west arterial that extends west from the town of McHenry east to Illinois 120, near Illinois 83. This intersection is signal controlled with left-turn lanes provided on U.S. 12. Illinois 120 is a major east-west arterial and a designated SRA. Illinois 120 has a signalized intersection with left-turn lanes along U.S. 12 and Illinois 120. This intersection is currently under construction and is being relocated to the south at Gilmore Road. The other signalized intersection in this segment is at Bonner Road. All other intersections have stop control on the cross street only.

Very little congestion is evident along this segment of U.S. 12. At times, there are minimal delays at signalized intersections, although such delays fall well within acceptable levels of service. Operating conditions along the U.S. 12 corridor are good, with high levels of service, and operating speeds are relatively high (posted speed limits of 45 and 55 mph).

At the Illinois 59 interchange north of Illinois 134, the southbound entrance ramp is a left-hand ramp. At times, traffic entering at a slower speed on the left impacts traffic in the left lane. There is no parking permitted along U.S. 12 within this segment.

Existing traffic demand within this segment, based on the 1988 Lake County ADT Map (see Exhibits A-5 to A-8), ranges from 13,700 to 26,000 vpd. The lowest ADT is reported along U.S. 12 between Brandenburg Road and Fox Lake Road. Traffic increases south of Illinois 120, reaching 26,000 vpd near Bonner Road.

Accident data (see Exhibits A-5 to A-8) for 1987 to 1989 were obtained from IDOT accident summaries. Intersection accident rates were calculated at only one location. The total intersection accident rate at Illinois 120 was 1.54 accidents per MEV. Segment accident rates, in terms of accidents per MVM, also were computed along this segment of U.S. 12. Segments accident rates ranged from 1.69 to 4.19 accidents per MVM. The highest segment rate (4.19 accidents per MVM) was calculated north of Illinois 120. All calculated segment accident rates are well below statewide averages.

### ***Public Transportation***

Railroads or Pace bus routes do not operate along this segment of U.S. 12 (see Table 3 and Exhibits A-5 to A-8).

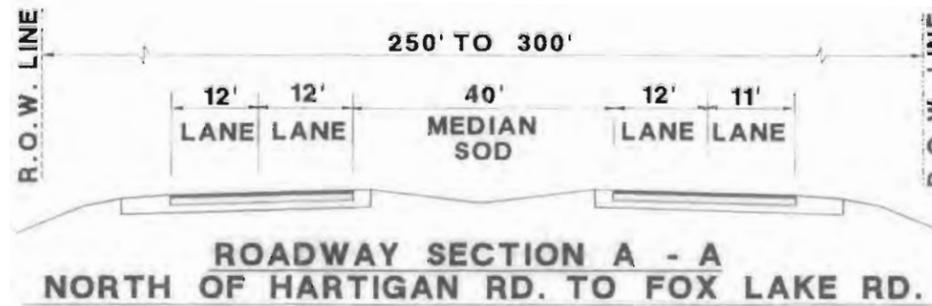
### ***Environmental Constraints and Land Use***

The environmental concerns within this segment from north to south are shown on the Planning Focus Area Exhibits (see Exhibits B-5 to B-8). Environmental constraints along this segment involve mostly wetlands at various locations. The most notable concerns include wetland locations identified between Brandenburg Road and Molidor/Sullivan Lake Road on both sides of U.S. 12. A number of wetlands also have been identified north of Illinois 120 (on both sides of U.S. 12), and north and south of Case Road, also adjacent to both sides of the corridor. Historic sites, CERCLIS sites, or LUST sites were not noted (see Table 10). Floodplains/floodways have been identified north of Molidor Road, north of Illinois 120, and four locations identified between Gilmore Road and Bonner Road. No historic, CERCLIS, or LUST sites have been identified along Segment III.

Existing land use within Segment III consists primarily of open/agricultural uses. Some commercial activity exists in the vicinity of Illinois 120. Sensitive land uses include the

Big Hollow Middle and Elementary School located in the southeast quadrant of U.S. 12 and Illinois 134. Areas that are zoned as commercial uses but are yet to be developed, include areas west of U.S. 12 and north and south of Illinois 134, and areas in the southwest quadrant of Illinois 120. This area in particular has been designated as the site for a future regional shopping center.

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



	19,200	14,000	13,700
<b>1988 - 1990 AVERAGE DAILY TRAFFIC</b>			
<b>ACCIDENT RATE</b>	3.13 / MVM		4.19 / MVM
<b>TRANSIT ROUTES</b>		METRA RAIL NONE PACE BUS NONE	
<b>EDGE OF ROAD USE</b>	(P)	(P)	(P)
	(P)	(P)	(P)

**U.S. 12 EXISTING CONDITIONS**

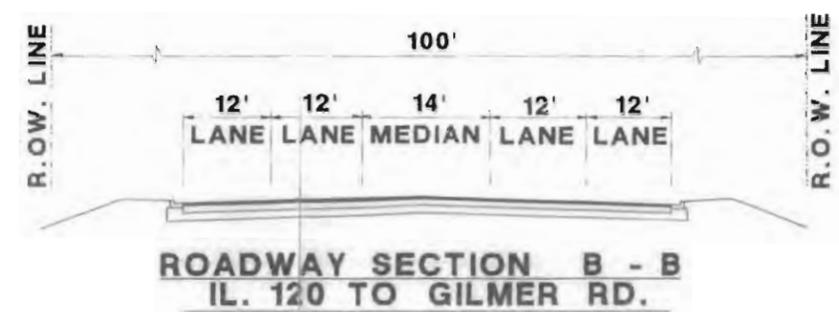
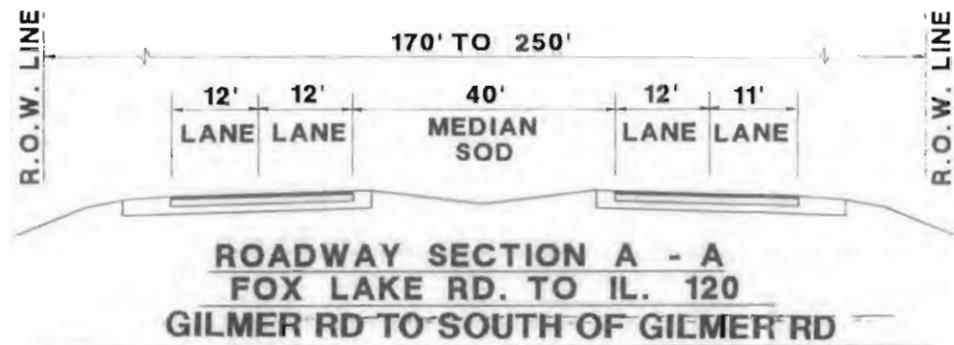


Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
■	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

17,800

21,100

ACCIDENT  
RATE

4.19 / MVM

1.54/MEV

2.79 / MVM

TRANSIT  
ROUTES

METRA RAIL NONE

PACE BUS NONE

EDGE OF  
ROAD USE

EAST  
WEST

(P)

(P)

(P)

(P)

### U.S. 12 EXISTING CONDITIONS

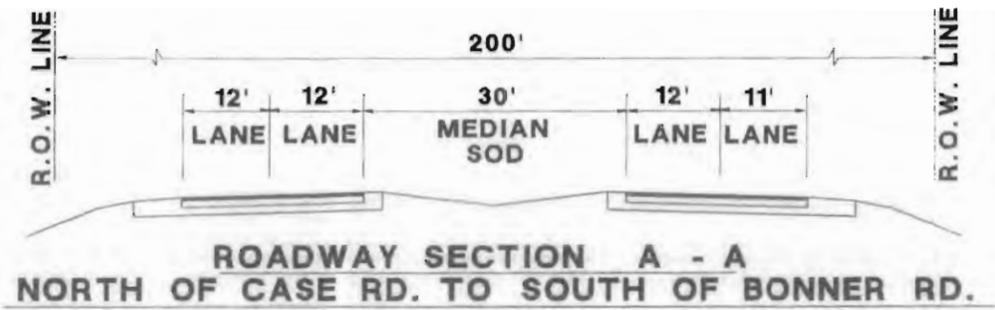
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study EXHIBIT A-7

Scale 0 200 400 Feet

LEGEND	
△	SIGNALIZED INTERSECTION
→	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

21,100

26,000

ACCIDENT  
RATE

2.79 / MVM

1.69 / MVM

TRANSIT  
ROUTES

METRA RAIL NONE

PACE BUS 45,780

EDGE OF ROAD USE

EAST

WEST



### U.S. 12 EXISTING CONDITIONS

**SRA** Strategic Regional Arterial Planning Study EXHIBIT A-8

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale: 0 200 400 feet

# PLANNING FOCUS AREAS

## A) NORTH OF MOLITOR ROAD TO NORTH OF HARTIGAN ROAD

- Wetlands adjacent to both sides of U.S. 12 may limit improvement alternatives
- Floodplain adjacent to U.S. 12



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (DESIRABLE)

### LEGEND

- A Planning Focus Area I.D.
- (G) Hazardous Waste Site
- (L) Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- /// Floodplain/Floodway
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-6

# PLANNING FOCUS AREAS

## A) IL. 120 TO FOX LAKE ROAD

- Wetlands adjacent to both sides of U.S. 12 may limit improvement alternatives
- Floodplain adjacent to U.S. 12

## B) IL. 120 INTERSECTION

- Intersection of two SRA routes

## C) GILMER ROAD TO IL. 120

- Limited available right-of-way
- Multiple driveway access points may affect SRA operation

## D) SOUTH OF GILMER ROAD

- Multiple driveway access points may affect SRA operation
- Floodplain adjacent to U.S. 12



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area I.D.
- (GT) Hazardous Waste Site
- (L) Leaking Underground Storage Tank
- (HI) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines
- /// Floodplain/Floodway

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-7

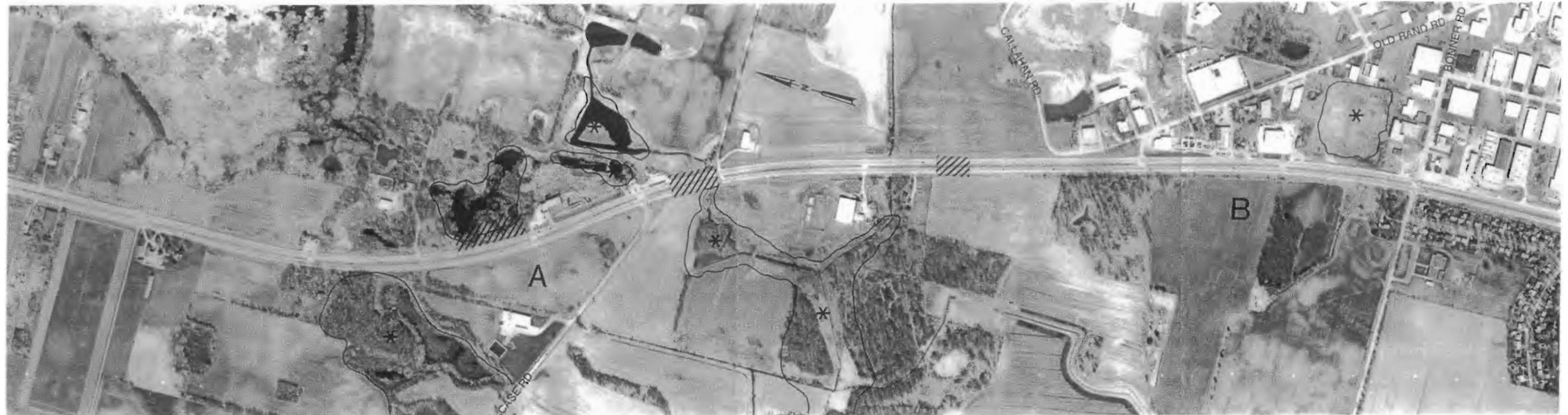
# PLANNING FOCUS AREAS

## A) NORTH OF CASE ROAD

- Multiple driveway access points may affect SRA operation
- Wetlands adjacent to either side of U.S. 12 may limit improvement alternatives
- Floodplain adjacent to U.S. 12

## B) NORTH OF BONNER ROAD TO OLD RAND ROAD

- Wetlands adjacent to northbound U.S. 12 may limit improvement alternatives
- Multiple driveway access points may affect SRA operation
- Proximity of Old Rand Road to northbound U.S. 12 may limit improvement alternatives



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area ID.
- (G1) Hazardous Waste Site
- (U) Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- ▨ Floodplain/Floodway
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-8

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

## **Segment IV——“Wauconda to North Barrington” (Bonner Road to Miller Road)**

Segment IV of U.S. 12, approximately 5.7 miles long, extends south from Bonner Road to Miller Road. This segment of U.S. 12 travels through portions of Wauconda, North Barrington, Hawthorn Woods, and Lake Zurich, all within Lake County.

### ***Physical Characteristics***

The existing cross section within this segment is fairly consistent. The cross section is characterized as a four-lane (two lanes in each direction) divided rural facility. A continuous, 40-foot open ditch median separates northbound and southbound traffic lanes. The outer roadside design consists of paved or aggregate shoulders. Open ditches provide open drainage. Unlike Segment III, there are no frontage roads that serve this segment of the corridor. Exhibits A-9 to A-11 illustrate the existing conditions for Segment IV.

Horizontal alignment along this segment is comprised mostly of long tangents and a few mild curves. Horizontal curvature does not exceed 1°-30'. The horizontal design speed is greater than 60 mph and well within the criteria established for suburban SRAs. The vertical alignment within this segment is relatively level, with mild grades. The right-of-way within this segment is constant at 200 feet.

Other physical characteristics worth noting along this segment include the structures listed in Table 9. These structures include two U.S. 12 structures over Illinois 176 and a structure carrying Illinois 59 over U.S. 12.

<b>Table 9</b> <b>Existing Structures Along Segment IV</b> <b>(Bonner Road to Miller Road) of U.S. 12</b>			
Structure	IDOT Structure Reference	Feature	
		Over	Under
Bridge	049-0022	Illinois 176	—
Bridge	049-0023	Illinois 176	—
Bridge	049-0085	—	Illinois 59

***Traffic Control, Operations, and Safety***

Major intersections within the segment, from north to south, include Illinois 176 and Illinois 59. Both of these corridors are designated as suburban SRAs. Illinois 176 is a designated SRA to the north and south. The intersection of Illinois 176 and U.S. 12 is controlled by a grade-separated “diamond” interchange, with U.S. 12 traveling over Illinois 176. An interchange also serves the intersection of Illinois 59 and U.S. 12, which only accommodates movements from Illinois 59 south to and from U.S. 12 north. Signalized intersections along this segment are located at Bonner Road, McHenry Road, Lake Shore Drive, and Miller Road. Left-turn lanes are provided along U.S. 12 at the approaches to all signalized intersections. Right-turn lanes are provided on northbound approaches to the intersections at Lake Shore Drive and McHenry Road. Stop signs located on the crossroad control all other intersections with U.S. 12.

Very little congestion is evident along this segment of U.S. 12. At times, there are minimal delays at signalized intersections, although such delays are well within acceptable levels of service. Operating conditions along Segment IV of U.S. 12 are good, with high levels of service and no apparent safety problems. Operating speeds are relatively high (a posted speed limit of 55 mph). There is no parking permitted along U.S. 12 within this segment.

Existing traffic demand for this segment, based on the 1988 Lake County ADT Maps (see Exhibits A-9 to A-11), ranges from 23,400 to 28,800 vpd. The heaviest traffic volumes occur to the south, south of McHenry Road. Heavy volumes also are reported between the Illinois 176 and Illinois 59 interchange. The lowest volumes are found north of Illinois 176.

Accident data (see Exhibits A-9 to A-11) for 1987 to 1989 were obtained from IDOT accident summaries. Because intersection accident data were unavailable, intersection accident rates were not calculated. Segment accident rates, in terms of accidents per MVM, also were computed along this segment of U.S. 12. Segment accident rates ranged from 1.69 to 2.78 accidents per MVM. All of these rates are well below statewide average accident rates.

### ***Public Transportation***

Railroads or Pace bus routes do not operate along this segment of U.S. 12 (see Table 3 and Exhibits A-9 to A-11).

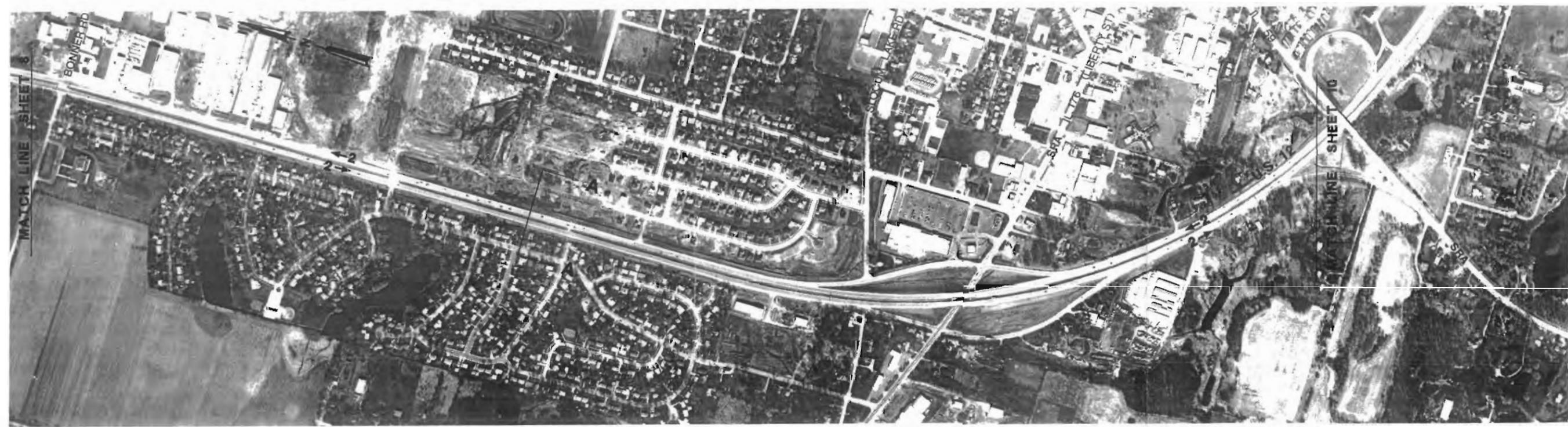
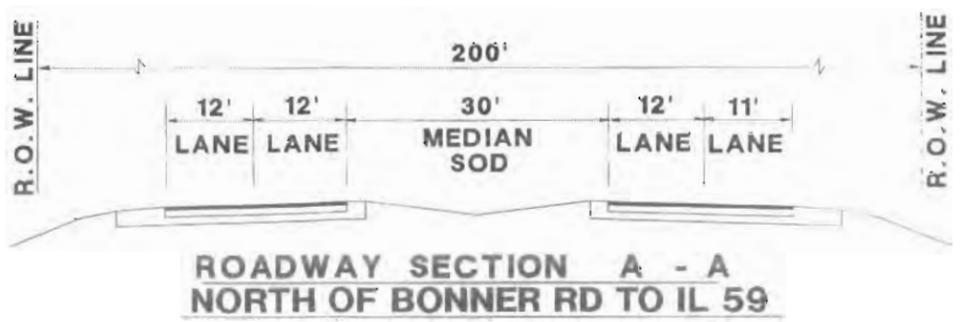
### ***Environmental Constraints and Land Use***

The environmental concerns within this segment north to south are shown on the Planning Focus Area Exhibits (see Exhibits B-9 to B-11). Environmental constraints along this segment involve mostly wetlands at various locations. Wetlands have been identified adjacent to the east side of U.S. 12 just south of Bonner Road. Other wetlands are located at the northeast and southwest quadrants of the Illinois 59 interchange, and at spot locations on the east and west sides of U.S. 12 south of Timberlake Drive. Two sections of U.S. 12 lie within the existing floodplains. These are located north of Illinois 176 and south of Bonner Road. Historic, CERCLIS, or LUST sites were not noted.

The land use within this segment consists primarily of residential land uses. Residential developments are located on both sides of U.S. 12 south of Bonner Road to Illinois 176. Similarly, from McHenry Road south to Miller Road, most of the land use is residential. Along the east side of U.S. 12 south of Timberlake Drive is the St. Joseph's Community Children's Home. Some commercial areas exist between Illinois 176 and Illinois 59.

**LEGEND**

△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

23,400	27,800
1.69 / MVM	1.69 / MVM
METRA RAIL NONE	
PACE BUS NONE	
(P)	(P)
(P)	(P)

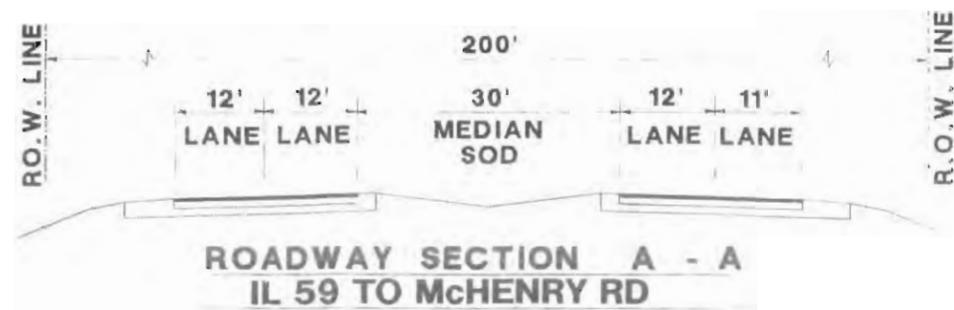
**U.S. 12 EXISTING CONDITIONS**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study

EXHIBIT A-9

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990 AVERAGE DAILY TRAFFIC	27,800	25,000	27,900
ACCIDENT RATE	2.34 / MVM		
TRANSIT ROUTES	METRA RAIL NONE PACE BUS NONE		
EDGE OF ROAD USE	EAST (P)	(P)	(P)
	WEST (P)	(P)	(P)

### U.S. 12 EXISTING CONDITIONS

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study EXHIBIT A-10

Scale 1" = 200' 400 feet



# PLANNING FOCUS AREAS

## A) SOUTH OF BONNER ROAD

- Multiple driveway access points may affect SRA operation
- Wetlands adjacent to northbound U.S. 12 may limit improvement alternatives
- Floodplain adjacent to U.S. 12

## B) IL. 59 TO IL. 176

- Limited ramp spacing between IL. 176 southbound entrance ramp and IL. 59 southbound exit ramp may affect southbound SRA operation

## C) IL. 176 INTERCHANGE

- Intersection of two SRA routes
- Existing driveway access permitted to interchange ramps
- Access points south of interchange may affect operation of interchange

## D) NORTH OF IL. 59

- Wetlands adjacent to east side of U.S. 12 may limit improvement options



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area (D)
- (G1) Hazardous Waste Site
- (U1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- /// Floodplain/Floodway
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-9

# PLANNING FOCUS AREAS

## A) IL. 59 INTERCHANGE

- Intersection of two SRA Routes
- Existing driveway access permitted to loop ramp
- Access points north of interchange may affect operation of interchange
- Wetlands may limit improvement options

## B) IVANHOE ROAD TO IL. 59

- Multiple driveway access points may affect SRA operation

## C) OLD RAND ROAD

- Proximity of Old Rand Road to northbound U.S. 12 limits improvement alternatives

## D) OLD MCHENRY ROAD TO LAKE SHORE DRIVE

- Multiple driveway access points may affect SRA operations



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area (D)
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- Wetland
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-10

# PLANNING FOCUS AREAS

## A) MILLER ROAD TO OLD MCHENRY ROAD

- Multiple driveway access points may affect SRA operations
- Floodplain adjacent to U.S. 12



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area
- (C1) Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland // Floodplain/Floodway
- † ⚡ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

## **Segment V——“Lake Zurich to Kildeer” (Miller Road to Lake-Cook Road)**

Segment V is approximately 6.1 miles long, extending south from Miller Road to Lake-Cook Road. This segment includes communities of Lake Zurich, Kildeer, Deer Park, and Long Grove. This segment is within Lake County.

### ***Physical Characteristics***

The cross section along Segment V of U.S. 12 varies in design along its length. The existing section has four lanes (two lanes in each direction of travel). Just south of Miller Road, the rural, open cross section transitions to an urban-type design with closed drainage to a point south of Ela Road. South of Miller Road to Illinois 22, the median is raised (curb and gutter) and ranges from 30 to 16 feet wide. South of the EJ&E Railway, the cross section transitions back to a rural-type design, with open drainage and an open, 30-foot median. This cross section extends to just north of Quentin Road. From north of Quentin Road to Lake-Cook Road, the cross section becomes urban with a 12- to 14-foot continuous flush median.

The horizontal alignment consists of mild curves and tangents. The maximum horizontal curvature is approximately 1°-45' located through the Illinois 22 intersection and north of Quentin Road. The vertical alignment is best characterized as level with some mild rolling terrain.

The right-of-way within the segment varies from 200 to 100 feet. From Miller Road to approximately North Old Rand Road, 200 feet of right-of-way is provided. From North Old Rand Road to approximately 1,000 feet north of Quentin Road, the right-of-way is 150 feet. North of Quentin Road to Quentin Road, existing right-of-way is estimated at 130 feet. From Quentin Road to just south of Long Grove Road, right-of-way reduces to 100 feet. A small section of U.S. 12 north and south of Long Grove Road has 150 feet of right-of-way. The right-of-way then tapers back to 100 feet to Lake-Cook Road.

Only one other physical characteristics is worth noting in this segment. An EJ&E Railway structure crosses over U.S. 12 south of Ela Road (see Table 10). This structure has a clearance of 14 feet, 3 inches over U.S. 12.

<b>Table 10</b> <b>Existing Structures Along Segment V</b> <b>(Miller Road to Lake Cook Road) of U.S. 12</b>			
<b>Structure</b>	<b>IDOT Structure Reference</b>	<b>Feature</b>	
		<b>Over</b>	<b>Under</b>
Bridge	049-0024	—	EJ&E Railroad

***Traffic Control, Operations, and Safety***

There are a number of major intersections within Segment V. Signalized intersections are provided at 12 locations. Major intersections include Illinois 22, Quentin Road, and Lake-Cook Road. Each of these corridors are designated as suburban SRAs. All signalized intersections have left-turn lanes along the U.S. 12 approaches. A right-turn lane is provided at the northbound approach to Quentin Road. Left-turn lanes are also provided at the approaches along Illinois 22, Quentin Road, and Lake-Cook Road.

Peak period traffic congestion occurs at a few locations. Through Lake Zurich from north of Illinois 22 to south of Ela Road, traffic along U.S. 12 is heavy. During the morning and evening peak periods, traffic at the Illinois 22 and U.S. 12 intersection often experiences long delays and long queues, and frequently must wait through more than one signal cycle. Similarly, north of Lake-Cook Road, traffic operations at times can become critical. This critical operation results not only from heavy traffic volumes, but from the frequency and number of driveways that have access to U.S. 12.

No parking is permitted along U.S. 12. Speed limits along this segment are posted between 45 and 55 mph. Fifty five mph speed limits exist between Miller Road and North Old Rand Road, and from north of Ela Road to north of Quentin Road. All other portions of this segment are posted at 45 mph.

Existing traffic demand within Segment V is based on the 1988 Lake County Traffic Map (see Exhibits A-12 and A-14). Existing traffic within this segment ranges from 30,000 to 35,800 vpd. The highest ADT is reported north of Cuba Road (35,800 vpd) and between Illinois 22 and Ela Road (34,700 vpd). In general, traffic volumes are on the order of 30,000 vpd, with traffic volumes increasing to the south.

Accident data (see Exhibits A-12 and A-14) were obtained for 1987, 1988, and 1989. Segment accident rates were calculated along U.S. 12 in accidents per MVM. Intersection accident rates in accidents per MEV also were calculated at selected intersections for which data were available. Intersection accident rates were calculated at Illinois 22 (1.69 accidents per MEV), Ela Road (1.28 accidents per MEV), Cuba Road (1.23 accidents per MEV), and Lake-Cook Road (2.38 accidents per MEV). These rates are not considered high by comparison to similar facilities. Although the accident rate calculated at Lake-Cook Road is not considered high by statewide averages, this intersection does, however, experience a high number of accidents. Segment accident rates ranged from 2.91 to 7.25 accidents per MVM. The highest rates are identified between Quentin Road and Long Grove Road (7.25 accidents per MVM) and between Long Grove Road and Lake-Cook Road (6.99 accidents per MVM). These rates are roughly average to below average compared to statewide accident statistics.

### ***Public Transportation***

Rail lines do not operate in this segment of the corridor. Pace suburban bus service, however, operates two routes in this segment of the corridor. Pace Route 725 serves Lake Zurich and the surrounding communities, and travels along U.S. 12 between Cuba Road and Old Rand Road, and between Illinois 22 and Miller Road. This route, which has a peak hour frequency of 3 buses per hour, also serves the Barrington Metra Station. Pace Route 725, the second route serving the segment, crosses U.S. 12 at Ela Road.

This route also has a stop at the Barrington Metra Station and serves downtown Lake Zurich.

### ***Environmental Constraints and Land Use***

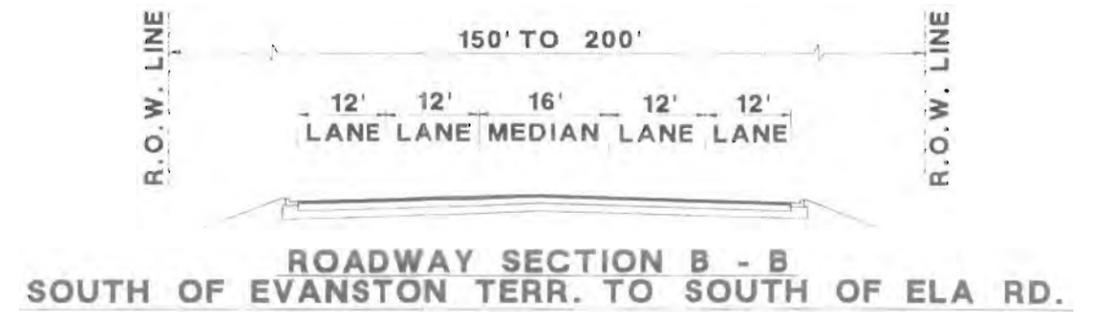
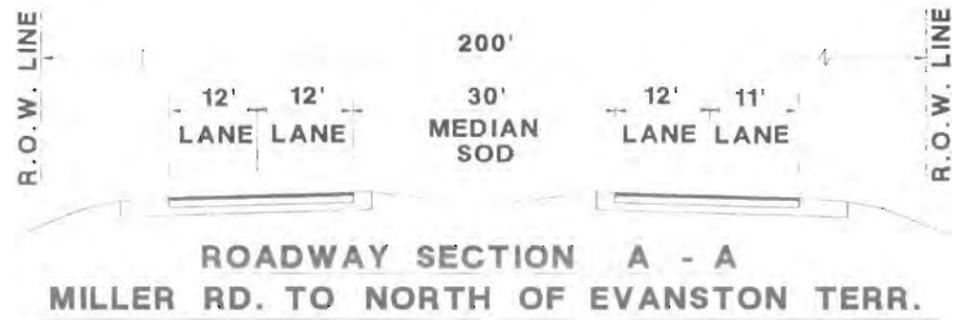
The environmental concerns within this segment are summarized in Table 11 and on the Planning Focus Area Exhibits (Exhibits B-12 and B-14). There are a variety of environmental concerns along this segment of U.S. 12. Wetlands have been identified north of Deerpath Road, in Lake Zurich, adjacent to both sides of U.S. 12. Other wetlands have been identified north of Old Rand Road, and north of Quentin Road. One section of U.S. 12, south of Miller Road, has been identified within the existing floodplain. Other concerns include four LUST sites, whose locations are listed in Table 11. Although a structure identified as a historic site is located near the intersection of U.S. 12 and Long Grove Road, this structure is located a sufficient distance from the corridor.

A mix of land use characterizes this segment of U.S. 12. Zoned commercial areas are located primarily between Miller Road and Illinois 22, between Deerpath Road and Cuba Road, and from Quentin Road to Lake-Cook Road. Residential areas are located within the commercial areas and are set back from the corridor. Zoned office uses are located along the east side of U.S. 12 south of the EJ&E Railway, and north of the EJ&E Railway along the west side of U.S. 12. Other important land uses include the Pleasant Acres Park located north of Illinois 22 on the east side of U.S. 12.

**Table 11**  
**Summary of Environmentally**  
**Sensitive Land Uses and Sites**  
**Along Segment V of U.S. 12**

Item	Exhibit No.	Reference	Description
Historic Sites	B-14	H 1	Grever House, U.S. 12 and Long Grove Rd., Barrington
CERCLIS Sites			None noted
LUST Sites	B-12, B-13 B-13 B-14 B-14	L 1 L 2 L 3 L 6	Mobil Oil, 650 S. Rand Rd., Lake Zurich Clark Oil, 21775 N. Highway 12 & Old Rand Rd., Lake Zurich Emro Marketing, 20245 N. Rand Rd., Palatine Colly Enterprises, 20370 W. Rand Rd., Palatine

LEGEND	
	SIGNALIZED INTERSECTION
	LANE ARRANGEMENTS AT KEY INTERSECTIONS
	PARKING ALLOWED
	PARKING PROHIBITED
	NO POSTED RESTRICTIONS
	DESIGNATED BUS STOP
	RAPID TRANSIT STATION
	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	31,500	34,700	30,000
	4.57 / MVM	7.05 / MVM	3.27 / MVM
		1.69/MEV	1.28/MEV
	METRA RAIL NONE		
	PACE BUS ROUTE 725 (3PEAK BUS/HR)	PACE BUS NONE	PACE BUS ROUTE 728
EAST			
WEST			

### U.S. 12 EXISTING CONDITIONS

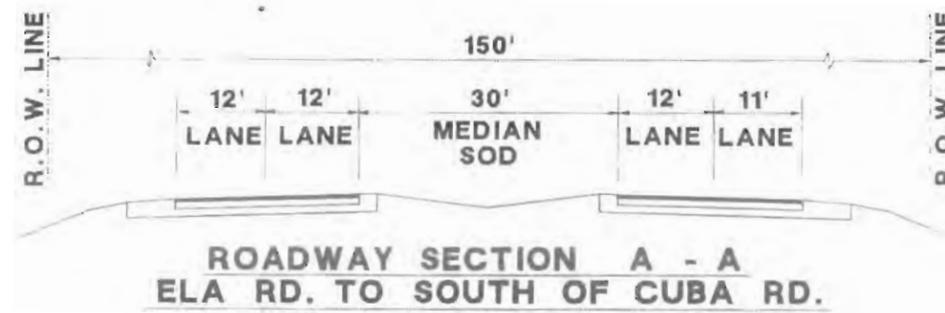
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT A-12



LEGEND	
△	SIGNALIZED INTERSECTION
+	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

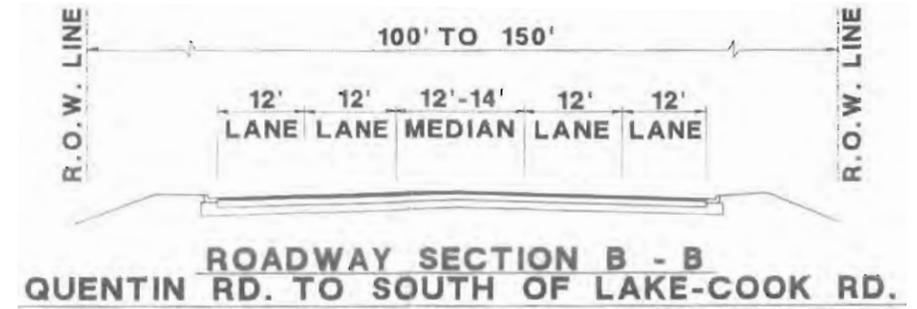
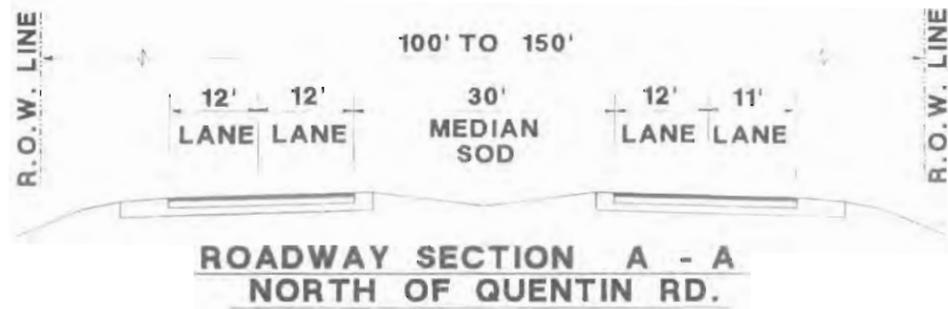
	30,000	35,800	31,600
	3.27 / MVM	8.14 / MVM	2.91 / MVM
		1.23/MEV	
	PACE BUS NONE	METRA RAIL NONE	PACE ROUTE 725 (3 PEAK BUS/HR)
EAST	P		P
WEST	P		P

### U.S. 12 EXISTING CONDITIONS

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

LEGEND	
△	SIGNALIZED INTERSECTION
⊕	LANE ARRANGEMENTS AT KEY INTERSECTIONS
Ⓟ	PARKING ALLOWED
Ⓟ	PARKING PROHIBITED
Ⓝ	NO POSTED RESTRICTIONS
Ⓟ	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	31,900	31,900	36,400
	2.91 / MVM	7.25 / MVM	6.99 / MVM
		METRA RAIL NONE	2.38/MEV
		PACE BUS NONE	
EAST	Ⓟ	Ⓟ	Ⓟ
WEST	Ⓟ	Ⓟ	Ⓟ

### U.S. 12 EXISTING CONDITIONS

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study EXHIBIT A-14

Scale 0 100 200 feet

# PLANNING FOCUS AREAS

**A) N. OLD RAND ROAD TO MILLER ROAD**

- Wetlands adjacent to corridor may limit improvement options

**B) ELA ROAD TO MILLER ROAD**

- Multiple driveway access points and offset intersections may affect SRA operation

**C) IL. 22 INTERSECTION**

- Intersection of two SRA routes

**D) ELA ROAD INTERSECTION**

- Leaking underground storage tank site may affect future intersection improvements



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

LEGEND	
A	Planning Focus Area ID
	Hazardous Waste Site
	Leaking Underground Storage Tank
	Historic Building/District
*	Wetland
	Church/Synagogue/Religious Institution
	Agricultural Land
	Special Use Areas
	Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic  
Regional  
Arterial  
Planning Study  
EXHIBIT B-12

# PLANNING FOCUS AREAS

## A) ELGIN JOLIET & EASTERN RAILWAY

- Limited horizontal and vertical clearance under railway

## B) OLD RAND ROAD INTERSECTION

- Leaking underground storage tank site may affect future intersection improvements
- Skewed intersection geometry



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LÉGEND

- A Planning Focus Area ID
- ☒ Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- Ⓜ Historic Building/District
- \* Wetland
- † ⬠ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-13

# PLANNING FOCUS AREAS

## A) QUENTIN ROAD INTERSECTION

- Intersection of two SRA routes
- Proximity of adjacent wetlands may limit capacity improvements

## B) LAKE-COOK ROAD TO QUENTIN ROAD

- Limited right-of-way available

## C) LAKE-COOK ROAD TO LONG GROVE ROAD

- Multiple driveways and access points may affect SRA operations
- Leaking underground storage tanks sites could affect future right-of-way needs

## D) LAKE-COOK ROAD INTERSECTION

- Intersection of two SRA routes



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area I,D
- (C1) Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- (HT) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-14

## **Segment VI——“Arlington Heights to Des Plaines” (Lake-Cook Road to Illinois 58)**

Segment VI is approximately 10.1 miles long, extending from Lake-Cook Road to Illinois 58. This segment is located in Cook County and includes the communities of Arlington Heights, Mount Prospect, Prospect Heights, Palatine, and Des Plaines.

### ***Physical Characteristics***

The cross section along this segment of U.S. 12 consists of four lanes (two lanes in each direction), and generally is consistent throughout Segment VI. All sections in the segment have curb and gutter design with closed drainage systems. The cross section varies with the median dimension. Between Lake-Cook Road and Williams Drive, the median is flush and varies from 14 to 16 feet wide. South from Williams Drive to Arlington Heights Road and Euclid Avenue, the flush median varies between approximately 8 and 14 feet wide. Left-turn protection is afforded at all locations. The portion of the segment from Euclid Avenue to north of Wolf Road essentially has no median, and only approximately 2 to 4 feet separates the traveled ways. Left-turn protection, however, is provided at major intersections. South from Wolf Road to Golf Road, the median is approximately 12 feet. Exhibits A-15 to A-19 illustrate the existing conditions of Segment VI.

The horizontal alignment consists of long tangents and mild curves. The maximum horizontal curvature is approximately 3 degrees, which occurs north of the Illinois 53 interchange. Other horizontal curvature is 2 degrees or less. The vertical alignment is mostly level, with some mild rolling terrain.

The right-of-way along U.S. 12 within Segment VI is relatively constant. From south of Lake-Cook Road to approximately the Soo Line Railroad crossing in Des Plaines, the right-of-way is 100 feet. South of the Soo Line to Illinois 58, the right-of-way narrows to 66 feet.

There are several other physical characteristics worth noting in this segment. These include structures over or under U.S. 12. Table 12 list three structures along Segment

VI, the structure carrying U.S. 12 over the Buffalo Creek and the Illinois 53 structures over U.S. 12. Other physical characteristics include the at-grade Soo Line Railroad crossing of U.S. 12 and major utility lines that cross U.S. 12. These utility lines are located at the intersection of Hintz Road and just to the south of the Soo Line Railroad. One other physical characteristic is a designated bikeway that crosses U.S. 12 at Highland Street.

<b>Table 12</b> <b>Existing Structures Along Segment VI</b> <b>(Lake Cook Road to Golf Road) of U.S. 12</b>			
Structure	IDOT Structure Reference	Feature	
		Over	Under
Bridge	016-2518	Buffalo Creek	
Bridge	016-0371	—	Illinois 53 (SB)
Bridge	016-0973	—	Illinois 53 (NB)

***Traffic Control, Operations, and Safety***

There are a number of major intersections along Segment VI, including three intersections of other SRA routes. Palatine Road, Elmhurst Road (Illinois 83), and Illinois 58 ( Golf Road) are all designated suburban SRA routes, and have signal-controlled intersections with U.S. 12. Left-turn lanes are provided on all approaches to these intersections with the exception of northbound U.S. 12 at Elmhurst Road (which takes place at Kensington) and eastbound Illinois 58. Right-turn lanes are also provided along U.S. 12 at the northbound approach to Elmhurst Road. Other major signalized intersections include Dundee Road (Illinois 68), Arlington Heights Road, Central Road, and Wolf Road. At the intersection of Illinois 53, a grade-separated interchange controls the intersection. Exhibits A-15 to A-19 illustrate the existing conditions of Segment VI.

As with Segment V, traffic congestion occurs along most of this segment during morning and evening peak periods. Peak period congestion and poor operation is particularly evident at the two intersection triangles within this segment. These two intersection triangles are formed by U.S. 12, Elmhurst Road, and Kensington, and by U.S. 12, Mt. Prospect Road, and Central Road. At these intersections, significant delays are evident and long queues occur. The number and location of access driveways to the commercial properties on the approaches to and within these intersections further degrade the operation of U.S. 12 in this segment. A lack of access management and access control compounds these operational difficulties. The posted speed limit along this segment ranges from 40 to 45 mph. No parking is permitted along U.S. 12 in this segment.

Existing traffic demand within this segment is based on the 1986 Cook County Traffic Map (see Exhibits A-15 through A-19). ADT along this segment ranges from 24,300 to 36,400 vpd. Traffic data south from Central Road were unavailable. The highest ADT is just south of Lake-Cook Road (36,400 vpd). In general, traffic volumes taper off from north to south.

Accident data (see Exhibits A-15 through A-19) were obtained for 1987, 1988, and 1989. Segment accident rates were calculated along U.S. 12 in accidents per MVM. Intersection accident rates in accidents per MEV also were calculated at selected intersections for which data were available. Intersection accident rates were calculated at Hicks Road, Dundee Road, Euclid Avenue, and Elmhurst Road/Kensington Road. These rates ranged from a high of 3.55 accidents per MEV (at Dundee Road) to a low of 1.45 accidents per MEV (at Hicks Road). Although the accident rates calculated are not considered significantly high by statewide averages, the U.S. 12 intersections with Dundee Road and Palatine Road are known to have a high number of total accidents. Segment accident rates ranged from 4.69 to 15.4 accidents per MVM. The highest rates are identified between Lake-Cook Road and Hicks Road (12.72 accidents per MVM), Hicks Road to Dundee Road (13.33 accidents per MVM), from Dundee Road to Illinois 53 (15.40 accidents per MVM), and between Illinois 53 and Willow Road (12.09 accidents per MVM). These segment rates are higher than statewide averages for similar facilities.

## ***Public Transportation***

Rail lines do not operate in this segment of the corridor. However, the C&NW Northwest/Metra commuter rail line operates to the west, adjacent to U.S. 14 (Northwest Highway). Pace suburban bus service operates three routes in this segment. Pace Route 723, a north-south line, begins at the Arlington Heights C&NW/Metra Station and serves Arlington Heights and Palatine. This route travels along U.S. 12 between Baldwin Road and Old Hicks Road, at a frequency of three to four buses during peak operation. Pace Route 698 operates in the corridor in the vicinity of Chestnut Avenue. This north-south route provides service between the Arlington Heights C&NW/Metra Station and residential areas. Pace Route 690 crosses U.S. 12 along Arlington Heights and essentially serves areas along Arlington Heights Road.

## ***Environmental Constraints and Land Use***

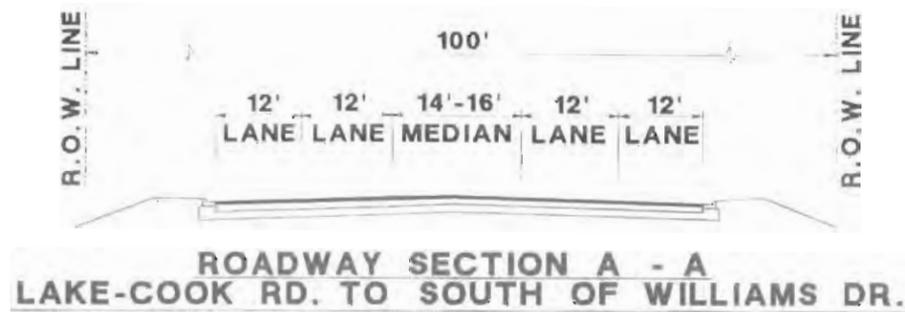
The environmental concerns within this segment are summarized in Table 16 and in the Planning Focus Area Exhibits (Exhibits B-15 and B-19). There are a variety of environmental concerns along this segment of U.S. 12. Wetlands have been identified on the east side of U.S. 12 north of Chestnut Avenue, associated with the detention and retention ponds for the apartment complex. Other wetlands are located a sufficient distance from the corridor, and pose no problem. Additional concerns include two LUST sites: one site in Palatine and a second in Arlington Heights (see Table 13). There were no CERCLIS sites identified.

There is a mix of land use along this segment of U.S. 12. Commercial areas are located along much of the U.S. 12 frontage. Zoned commercial areas are located south from Lake-Cook Road to Illinois 53, and from south of Hintz Road to Willow Road. There also are areas of commercial land use surrounding the Elmhurst Road/Kensington Road intersection and along U.S. 12 north and south of Central Road. Residential land uses are located adjacent to the corridor between Willow Road and south of Euclid Avenue, and from south of Central Road to Golf Road. Potentially sensitive land uses include the Randhill Park Cemetery located on the east side of U.S. 12 south of Illinois 53, the Rolling Green County Club on the west side of U.S. 12 north of Euclid Avenue, and the Cook County Forest Preserve District property north of Golf Road. Additional sensitive

land uses include the Cross and Crown Church, the Christian Life Church and College, and the Chippewa Junior High School.

<p align="center"><b>Table 13</b>  <b>Summary of Environmentally Sensitive Land Uses and Sites</b>  <b>Along Segment VI on U.S. 12</b></p>			
<b>Item</b>	<b>Exhibit No.</b>	<b>Reference</b>	<b>Description</b>
Historic Sites			None noted
CERCLIS Sites			None noted
LUST Sites	B-18	L 4	Marathon Petroleum 1295 W. Rand Rd., Palatine
	B-18	L 5	Mobil Oil 3005 E. Rand Rd., Arlington Heights

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	36,400	35,900	32,800
	12.72 / MVM	13.33 / MVM	15.40 / MVM
	1.45/MEV		3.55/MEV
	PACE BUS NONE	METRA RAIL NONE	PACE BUS ROUTE 723 (3-4 PEAK BUS/HR)
EAST	P	P	P
WEST	P	P	P

### U.S. 12 EXISTING CONDITIONS

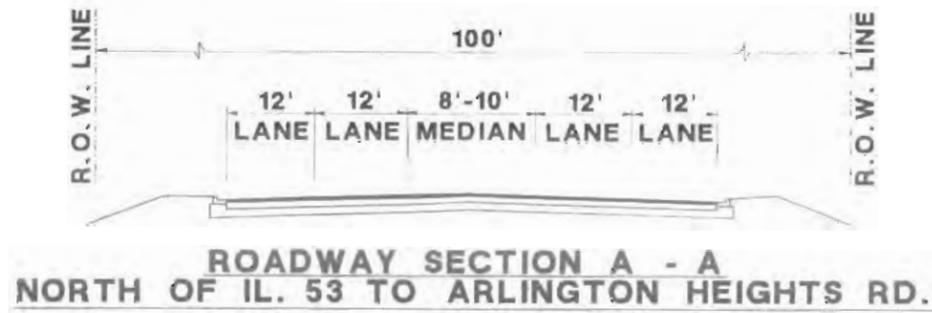
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT A-15

Scale 1" = 250' 300' 400'

LEGEND	
	SIGNALIZED INTERSECTION
	LANE ARRANGEMENTS AT KEY INTERSECTIONS
	PARKING ALLOWED
	PARKING PROHIBITED
	NO POSTED RESTRICTIONS
	DESIGNATED BUS STOP
	RAPID TRANSIT STATION
	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

32,800	24,300
15.40 / MVM	12.09 / MVM
PACE BUS NONE	METRA RAIL NONE
	PACE BUS ROUTE 698 (2 PEAK BUS/HR)
	PACE BUS NONE

### U.S. 12 EXISTING CONDITIONS

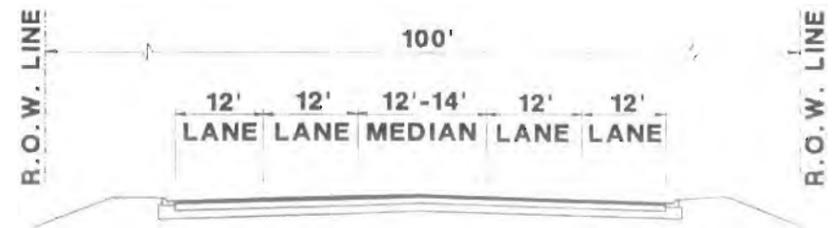
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

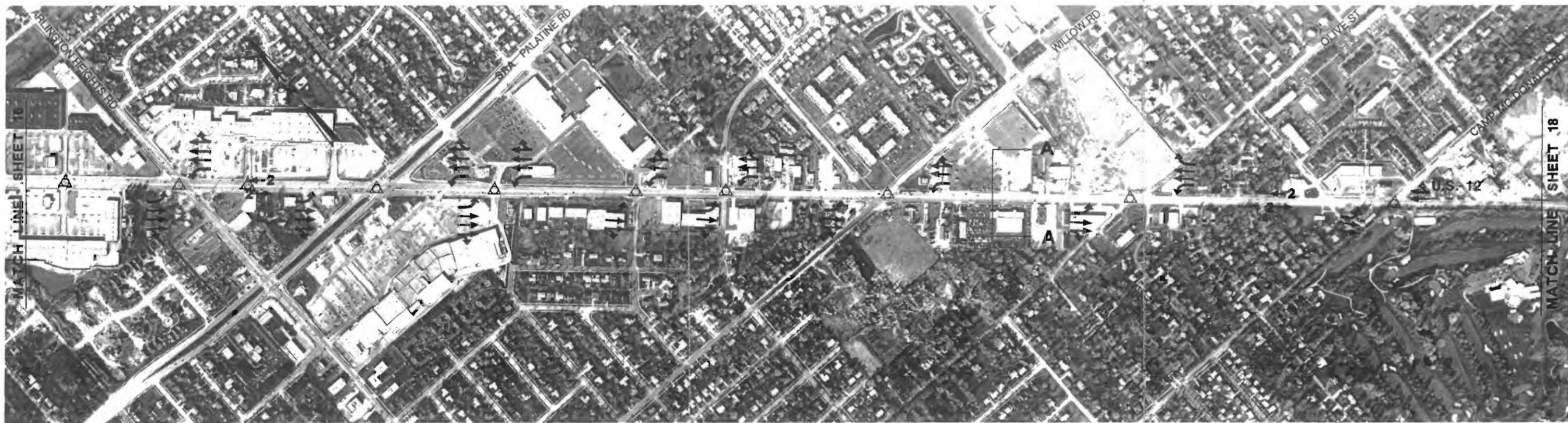
**SRA** Strategic  
Regional  
Arterial Planning Study  
EXHIBIT A-16

Scale: 1" = 200'

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
■	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



**ROADWAY SECTION A - A**  
**ARLINGTON HEIGHTS RD. TO SOUTH OF OLIVE ST.**



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	24,300		30,300	
	12.09 / MVM		4.69 / MVM	
	PACE BUS ROUTE 690		METRA RAIL NONE	
			PACE BUS NONE	
EAST	(P)	(P)	(P)	(P)
WEST	(P)	(P)	(P)	(P)

**U.S. 12 EXISTING CONDITIONS**

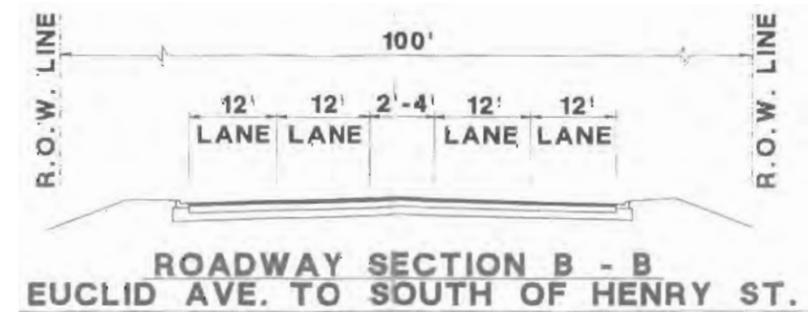
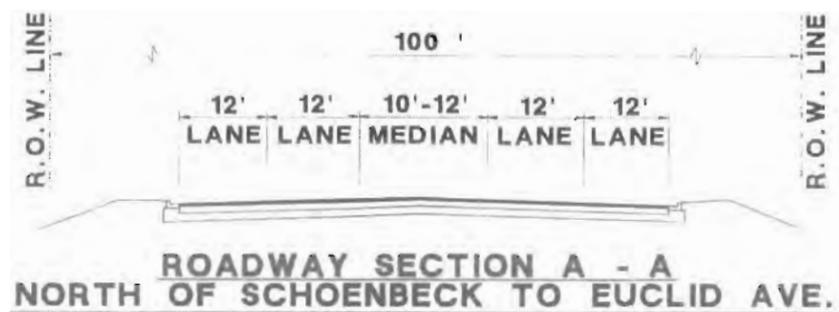
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

**ILLINOIS DEPARTMENT OF TRANSPORTATION**



**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



**1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC**

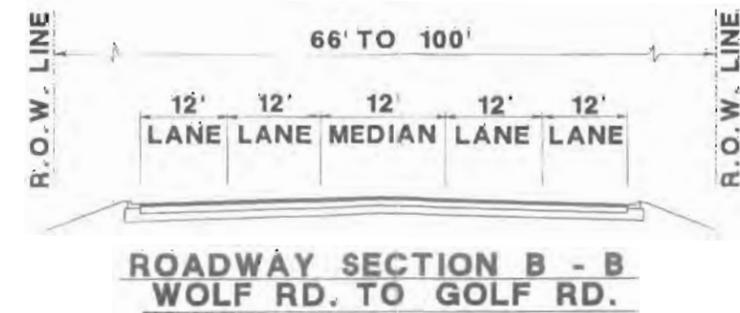
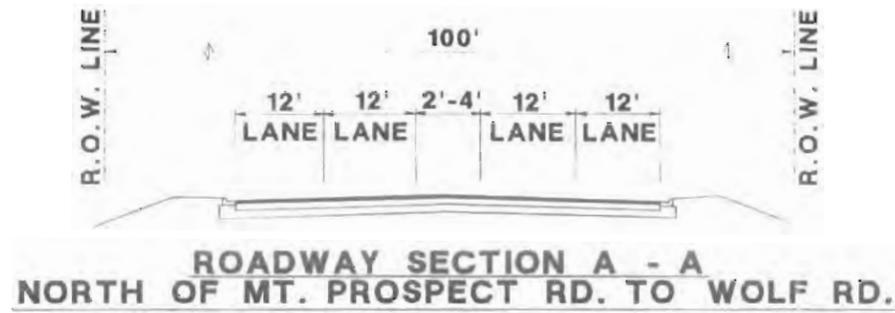
**ACCIDENT  
RATE**

**TRANSIT  
ROUTES**

**EDGE OF  
ROAD USE**

	30,300		31,100		24,300		33,200	
	4.69 / MVM		13.94 / MVM		1.70/MEV		6.74 / MVM	
	1.70/MEV				1.70/MEV			
					METRA RAIL NONE			
					PACE BUS NONE			
EAST	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)
WEST	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

30,200

ACCIDENT  
RATE

TRANSIT  
ROUTES

METRA RAIL NONE  
PACE BUS NONE

EDGE OF  
ROAD USE

EAST  
WEST

(P)  
(P)

(P)  
(P)

(P)  
(P)

**U.S. 12 EXISTING CONDITIONS**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial EXHIBIT A-19 Planning Study

Scale: 0 200 400 feet

# PLANNING FOCUS AREAS

## A) LAKE-COOK ROAD INTERSECTION

- Intersection of two SRA routes

## B) WILLIAMS DRIVE INTERSECTION

- Leaking underground storage tank site could affect future capacity improvements or right-of-way needs

## C) NORTH OF IL. 53 TO LAKE-COOK ROAD

- Multiple driveways and access points and offset intersections may affect SRA operations
- Limited available right-of-way



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

A	Planning Focus Area I.D.
(G)	Hazardous Waste Site
(L)	Leaking Underground Storage Tank
(H)	Historic Building/District
*	Wetland
†	Church/Synagogue/Religious Institution
---	Agricultural Land
---	Special Use Areas
—□—	Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-15

# PLANNING FOCUS AREAS

A) IL. 53 INTERCHANGE

- Limited horizontal and vertical clearance under IL. 53

B) HINTZ ROAD TO IL. 53

- Multiple driveway access points and offset intersections may affect SRA operations

C) CHESTNUT AVENUE TO IL. 53

- Wetlands and Randhill Park Cemetery on east side of corridor limits available right-of-way

D) ARLINGTON HEIGHTS ROAD TO NORTH OF IL. 53

- Limited available right-of-way



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

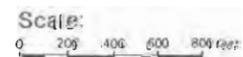
LEGEND

- A Planning Focus Area (D)
- (C1) Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-16

# PLANNING FOCUS AREAS

## A) WILLOW ROAD TO NORTH OF ARLINGTON HEIGHTS ROAD

- Dense commercial land use and multiple driveways and access points may affect SRA operation
- Consecutive closely-spaced signalized intersections

## B) NORTH OF EUCLID AVENUE TO NORTH OF ARLINGTON HEIGHTS ROAD

- Limited available right-of-way

## C) PALATINE ROAD INTERSECTION

- Intersection of two SRA routes
- Capacity improvements at intersection are constrained by adjacent land use



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area (D)
- (C) Hazardous Waste Site
- (L) Leaking Underground Storage Tank
- (H) Historic Building/District
- \*
- † \* Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-17

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale: 0 200 400 600 800 feet

# PLANNING FOCUS AREAS

## A) EUCLID AVENUE INTERSECTION

- Leaking underground storage tank site and golf courses adjacent to corridor could affect future right-of-way needs

## B) BUSINESS CENTER DRIVE AND ISABELLA STREET INTERSECTION

- Offset intersections at Business Center Drive and Isabella Street may affect SRA operation

## C) ELMHURST ROAD (IL 83) AND KENSINGTON ROAD INTERSECTIONS

- Intersection of two SRA routes
- Intersection triangle affects through capacity
- Capacity improvements for high-volume intersection are constrained by adjacent land use

## D) HENRY STREET TO NORTH OF EUCLID AVENUE

- Limited available right-of-way
- Multiple driveway access points may affect SRA operation



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(DESIRABLE)

### LEGEND

- A Planning Focus Area ID.
- (C1) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-18

# PLANNING FOCUS AREAS

**A) NORTH OF WOLF ROAD TO NORTH OF MT. PROSPECT**

- Multiple driveway access points may affect SRA operation

**B) GOLF ROAD TO NORTH OF MT. PROSPECT ROAD**

- Limited available right-of-way

**C) CENTRAL ROAD & MT. PROSPECT ROAD INTERSECTION TRIANGLE**

- Intersection triangle affects through capacity

**D) SOO LINE RAILROAD CROSSING**

- Through traffic may be affected by at-grade railroad crossing

**E) GOLF ROAD (IL 58) INTERSECTION**

- Intersection of two SRA routes



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (DESIRABLE)

LEGEND	
A	Planning Focus Area I.D.
☠	Hazardous Waste Site
▽	Leaking Underground Storage Tank
⬠	Historic Building/District
*	Wetland
✠	Church/Synagogue/Religious Institution
---	Agricultural Land
---	Special Use Areas
—□—	Major Utility Lines

U.S. 12

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION



**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-19

## Summary

The U.S. 12 SRA corridor, which is approximately 38 miles long, is characterized by many different land uses and environmental concerns. The character of the roadway varies from its northern terminus at Illinois 31 near the Illinois-Wisconsin state line to its southern terminus at Illinois 58 (Golf Road). The northern end of U.S. 12 is rural in nature and is relatively undeveloped (with the exception of limited development through Spring Grove). South from Fox Lake to Lake Zurich, much of the land use is undeveloped. South from Lake Zurich, the corridor becomes more suburban in nature with increased density of existing development. Between Lake-Cook Road and Illinois 58 the density of development adjacent to the corridor is at its greatest, with minimal undeveloped land.

In the less developed segments in the northern portion of U.S. 12, including areas within Spring Grove, development is expected to intensify. North and south of Spring Grove, sensitive environmental areas associated with the Nippersink Creek and wetlands limit the potential for development growth. South of Illinois 134 to south of Illinois 120, much of the open land is expected to develop as commercial property. Opportunities and options exist in these open areas for improving the capacity and operation of U.S. 12 and developing an appropriate access management plan. South of Lake-Cook Road, intense commercial and residential development along with various sensitive land uses limit improvement alternatives along U.S. 12. Traffic volumes also increase as the corridor travels from north to south. In the northern segments north of Fox Lake, ADT volumes range from 7,400 to 8,800 vpd, and in the developed areas to the south, traffic volumes range from approximately 20,000 to 35,000 vpd. Over the next 20 years, traffic volumes are expected to increase along the entire corridor.

Chapter III describes the planning framework within which the recommended plan was developed. Topics discussed in Chapter III include route design considerations, expected year 2010 transportation system changes and traffic volumes, year 2010 land use planning and development information, and any future areas of concern identified during improvement planning.

*U.S. 12 SRA*

Chapter III

**U.S. 12 SRA**

**Planning Framework**

## Chapter III

# U.S. 12 SRA Planning Framework

Long-range planning for the U.S. 12 (Rand Road) corridor must be based on a range of transportation, land use, and community concerns. Regional transportation needs require balancing with local interests, plans, and constraints.

This chapter outlines the planning framework within which the U.S.12 corridor should be viewed. Discussion in the chapter addresses both existing problems and conditions, as well as expected or forecast conditions for the long range. The following is a summary of the important elements of the U.S. 12 planning framework:

- Functional classification (the roles of SRAs in general, and U.S. 12 specifically, in serving regional transportation needs)
- SRA route design considerations and characteristics
- Long-range forecasts of highway traffic activity along U.S. 12
- Other planned transportation improvements within, crossing, or near the U.S. 12 corridor
- Long-range land use plans for the communities along U.S. 12 and for McHenry, Lake, and Cook Counties
- Existing safety and traffic operational problems along U.S. 12
- Existing environmental conditions and constraints
- Community concerns, interests, and attitudes

These comprehensive and often conflicting inputs were used to establish a basic concept for U.S. 12, which specifies:

- The number of continuous through lanes in each direction along U.S. 12

- Locations of future major signalized intersections
- Locations of special intersection design needs (i.e., possible interchanges)
- A general approach to access management
- The need for and locations of special or unique highway solutions
- Provision for enhancement of public transportation, including additional stops, park-and-ride facilities, and the interaction of parking facilities with Metra, Pace, and CTA services.

### **Functional Classification**

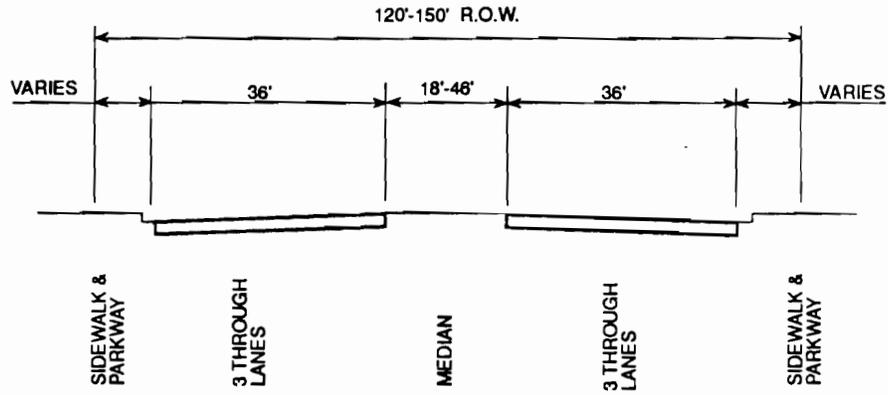
Previous planning efforts by the IDOT and CATS have established U.S. 12 as a SRA. The northern segment of U.S. 12, from Illinois 31 to approximately Illinois 134, has been classified as a rural SRA. South from Illinois 134 to Golf Road (Illinois 58), U.S. 12 is classified as a suburban SRA.

Planning guidelines developed for all SRA corridors specify that rural SRAs be planned as four-lane, continuous arterials. The desirable characteristics of rural SRAs include wide medians, shoulders, open drainage, and frontage roads where feasible. Suburban SRAs should be planned as six-lane, continuous arterials. Desirable characteristics of suburban SRAs include raised medians and closed drainage (see Exhibit 3). These guidelines represent an initial goal in planning improvements for U.S. 12.

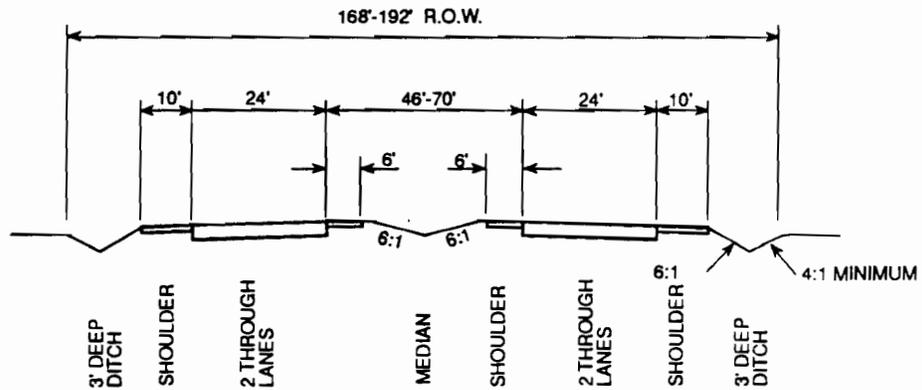
Implementation of six-lane sections in suburban areas is considered desirable only if it can be accomplished over significant lengths. In critical locations it is essential that any SRA be planned for a minimum of four continuous basic through lanes (two lanes in each direction).

### **Route Design Considerations**

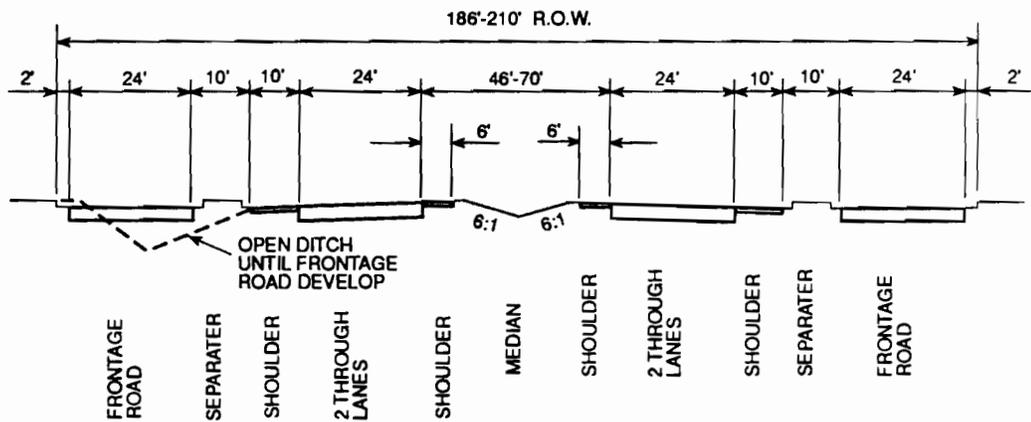
The SRA Design Concept Report, which serves as a guide in the planning of the SRA system, presents desirable cross sections for each SRA route designation in order to ensure adequate traffic service and geometric design within the right-of-way width



**Suburban Classification**  
 Illinois 134 to Illinois 58



**RURAL**



**RURAL WITH FRONTAGE ROADS**

**Rural Classification**  
 Illinois 31 to Illinois 134

indicated. The SRA desirable cross sections for rural and suburban designations are shown in Exhibit 3.

Rural SRAs require as much as 210 feet of right-of-way in order to implement an open median, open drainage, shoulders, and adequate clear zones for safety. Frontage roads could be employed within the 210 feet of right-of-way.

Where frontage roads are not planned, the Design Concept Report specifies a right-of-way of 192 feet. Table 14 describes other desirable route characteristics for rural SRAs.

The desirable suburban SRA concept cross section requires 120 to 150 feet of right-of-way. This width accommodates a six-lane roadway (three lanes in each direction) with an 18- to 46-foot raised median. The typical cross section implies a closed drainage system by including curb and gutter at the pavement edge. Other desirable route characteristics of a suburban SRA are listed in Table 15.

### **The 2010 Transportation Network**

Exhibit 4 illustrates U.S. 12 in a regional context. The corridor is crossed by 10 other SRA routes (Illinois 31, Illinois 59, Illinois 120, Illinois 176, Illinois 22, Quentin Road, Lake-Cook Road, Palatine Road, Illinois 83, and Illinois 58). These routes, in combination with U.S. 12, form a network of roadways intended to supplement the freeway system of northeastern Illinois by serving long-distance, regional through trips as well as shorter, local trips. Other major arterials that cross U.S. 12 are Illinois 134, Ela Road, Cuba Road, Illinois 53, Illinois 68 (Dundee Road), Arlington Heights Road, Euclid Avenue, and Central Street; these non-SRA routes also will have a significant impact on the future operation of U.S. 12.

Because U.S. 12 travels diagonally, in a northwest to southeast direction, there are no corridors that parallel U.S. 12. However, 2 to 13 miles to the west, U.S. 14 (a SRA) approximately parallels U.S. 12. Other SRA and non-SRA corridors parallel U.S. 12 for a portion of their length. These routes include Illinois 31 (a SRA between U.S. 12 and the Randall Connector), which runs parallel to U.S. 12 from Illinois 59 to Illinois 22, 5 to 9 miles to the west; and U.S. 45 (a SRA between the Illinois-Wisconsin state line to Illinois 120), which parallels U.S. 12 from Illinois 59 to Illinois 22, roughly 6.5 to 8.5

miles to the east. Another major north-south facility, I-94/I-294, is located 1.5 to 17.5 miles east of U.S. 12.

Although not pictured in Exhibit 4, but also considered a part of the local transportation network and the CATS 2010 long-range transportation network, is the planned extension of Illinois 53 (FAP 342) through Lake County from Lake-Cook Road to Illinois 120. The current alignment presently under study would parallel U.S. 12 between Illinois 120 and Lake-Cook Road, 1.5 to 7.5 miles to the west. It is anticipated that this future corridor would complement U.S. 12 by carrying a substantial amount of north-south traffic.

Five railroad facilities either cross or have proximity effects on U.S. 12. Commuter rail lines that serve the corridor include the Metra/Milwaukee North line and the Metra C&NW Northwest line. The Metra North line parallels U.S. 12 through Fox Lake before diverging from U.S. 12 as it heads south. The Metra Northwest line does not cross U.S. 12, but travels parallel (1 to 5 miles to the west) to the southern portion of the roadway between Lake-Cook Road and Golf Road. Other non-commuter routes that affect U.S. 12 include the CMStP&P Railroad, a freight line that parallels U.S. 12 north of Fox Lake. The EJ&E Railway, another freight line, has a grade-separated crossing of U.S. 12 in Lake Zurich south of Ela Road. The Soo Line is also a freight line that crosses U.S. 12 at grade, north of Golf Road.

### **Year 2010 and Existing Traffic**

Forecasts of traffic volumes were prepared by CATS to illustrate the level and pattern of traffic under expected future conditions. The forecasts were based on regional land use assumptions furnished by the Northeastern Illinois Planning Commission (NIPC), and assume a network as specified in the year 2010 plan, with the full SRA system in place designed to the desirable SRA criteria. Specific to U.S. 12, the forecasts also assume that Illinois 53 (FAP 342) is in place.

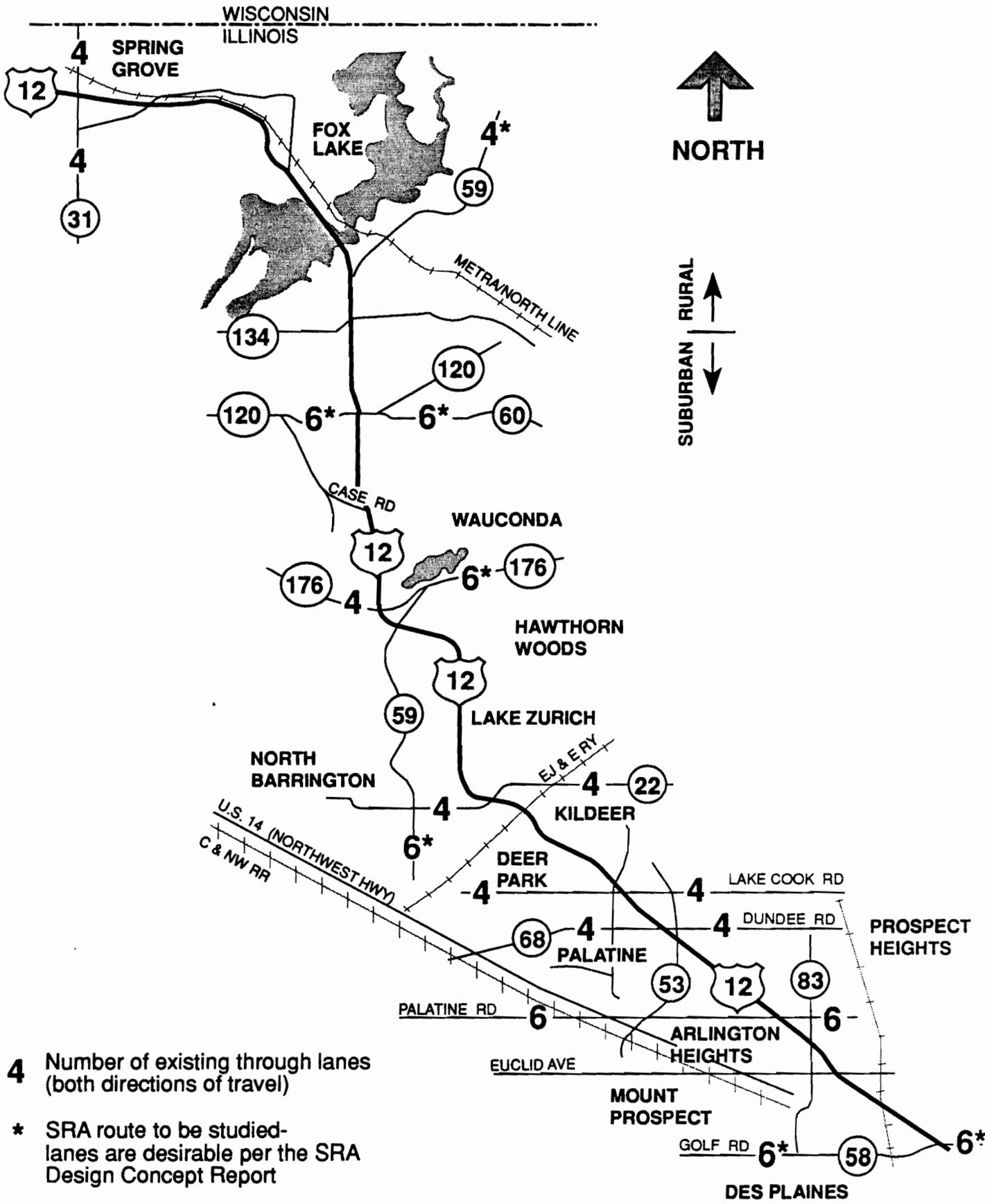
The traffic forecasts are used as a reference only—not as a primary tool in corridor sizing. They provide a means, particularly when compared to existing traffic, of judging the long-range need for corridor improvements. In short, traffic volumes can be expected to increase over the next 20 years. Employment and population growth will continue to be significant in Lake and McHenry Counties.

**Table 14**  
**Year 2010 Desirable Route Characteristics for Rural SRAs**

<b>Right-of-Way Width</b>	168 to 210 feet
<b>Level of Service (Peak Hour)/Design Speed</b>	C/60 mph
<b>Number of Through Lanes</b>	Two in each direction; 12-foot width; with provision for future expansion to six total lanes
<b>Median Width</b>	46 to 70 feet, raised
<b>Right Turns</b>	Turn lanes at major cross streets
<b>Left Turns</b>	Turn lanes at all intersections
<b>Shoulders</b>	10 feet paved (right), 6 feet paved (left)
<b>Curbs</b>	No
<b>Sidewalks</b>	If needed
<b>Parking</b>	No
<b>Cross Street Intersections</b>	Permitted; stop sign control for cross street
<b>Curb Cut Access</b>	Project right-of-way for post-2010 construction of two-way frontage roads
<b>Transit</b>	Bus pull-off and shelter; express bus service and signal pre-emption potential
<b>Number of Traffic Signals per Mile</b>	Two
<b>Signalization</b>	Fully-actuated
<b>Freight:</b>	
<b>Radii</b>	WB-60; Standard
<b>Vertical Clearances</b>	New Structures: 16' - 3"
	Existing Structures: 14' - 6"
<b>Loading</b>	Off-street

**Table 15  
Year 2010 Desirable Route Characteristics for Suburban SRAs**

<b>Right-of-Way Width</b>	120 to 150 feet
<b>Level of Service (Peak Hour)/Design Speed</b>	C or D/45 mph
<b>Number of Through Lanes</b>	Three in each direction; 12-foot width
<b>Median Width</b>	18 to 46 feet, raised
<b>Right Turns</b>	Turn lanes at all major intersections
<b>Left Turns</b>	Dual left turn lanes at all major intersections
<b>Shoulders</b>	Where appropriate, 10-foot width paved
<b>Curbs</b>	Yes, with 2-foot-wide gutters
<b>Sidewalks</b>	Where appropriate, 5-foot width
<b>Parking</b>	Not recommended
<b>Cross Street Intersections</b>	Signals with collectors and arterials, new local roads right-in/right-out only
<b>Curb Cut Access</b>	Consolidate access points at 500-foot spacing with cross easements
<b>Transit</b>	Bus turnouts, signs and shelters; express bus service only; signal pre-emption and HOV potential
<b>Number of Traffic Signals per Mile</b>	Four maximum
<b>Signalization</b>	Synchronization with pedestrian actuation where needed
<b>Freight:</b>	WB-55 typical/WB-60 Type II truck route
<b>Radii</b>	
<b>Vertical Clearances</b>	New Structures: 16' - 3"
	Existing Structures: 14' - 6"
<b>Loading</b>	Off-street



# FUTURE TRANSPORTATION NETWORK IN THE VICINITY OF U.S. 12

Table 16 shows that CATS traffic forecasts along U.S. 12 range from 10,000 to 50,000 vpd. In general, traffic volumes increase from north to south. North of Fox Lake, traffic volumes range from 10,000 to 20,000 vpd. South from Fox Lake to Illinois 59, traffic volumes on the order of 20,000 to 30,000 vpd are forecast. Forecast ADT of 30,000 to 40,000 vpd is estimated between Illinois 59 and Cuba Road. The heaviest future travel demand is projected to occur between Cuba Road and Lake-Cook Road, where future traffic is estimated between 40,000 and 50,000 vpd. South from Lake-Cook Road, future traffic is estimated between 30,000 and 40,000 vpd.

Location	Existing ADT (vpd) (1986-1989)	2010 ADT (vpd) Forecast
Illinois 31 to Johnsburg Wilmot Road	7,400 - 10,000	7,500 - 11,500
Johnsburg Wilmot Road to Molidor Road	14,400 - 21,300	18,000 - 34,000
Molidor Road to Bonner Road	13,700 - 21,000	14,000 - 26,000
Bonner Road to Miller Road	26,000 - 28,800	22,000 - 34,000
Miller Road to Illinois 53	30,000 - 36,400	25,000 - 49,000
Illinois 53 to Illinois 83	24,300 - 33,200	33,000 - 50,000
Illinois 83 to Illinois 58	Not Available	36,000 - 41,000

<sup>a</sup> Source: Chicago Area Transportation Study

## Other Corridor Planning Activities

### Roadway Improvements

Previous and current planning information was obtained for the U.S. 12 SRA corridor from the IDOT, CATS, McHenry County, Lake County, Cook County, and surrounding communities. All information received was considered in the planning effort, and some projects were considered as existing conditions. Projects listed in the IDOT's *FY 1993-1997 Proposed Highway Improvement Program* were considered as "existing" conditions, including:

- Improvement of the intersection at Illinois 83 and Kensington Road (FY 1993 Project)
- Installation of signals and interconnection of U.S. 12 at Plum Road with Lake-Cook Road

Another major study considered in the planning process for this study is the IDOT *FAP 420 Combined Location/Design Report for U.S. 12/Illinois 31 to Wisconsin State Line*. This study was referenced to determine and evaluate alternatives for the configuration of the U.S. 12/Illinois 31 intersection. An ongoing construction project that was considered as an existing condition is the Illinois 120 relocation project. This project is relocating the U.S. 12 crossing of Illinois 120 at Gilmer Road, and reconstructing Illinois 120 east and west of U.S. 12.

### **City and Village Comprehensive Plans**

Information regarding local transportation plans, land use plans, and community objectives was requested and sought out from communities along the U.S. 12 corridor. Table 17 lists those plans that were made available and were reviewed in conjunction with the overall corridor planning.

### **Transit Improvements**

Several transit-related improvements in the vicinity of U.S. 12 have been proposed, studied, or planned (see Table 18). The C&NW/Northwest line, along with other Metra lines, is being evaluated for service extensions. Metra is evaluating extending the McHenry branch of this line to Richmond (just two miles south of the Wisconsin border). This extension is proposed to operate parallel to Illinois 31, just west of the U.S. 12 corridor.

Metra is studying the potential of using the EJ&E Railway for commuter rail service sometime in the near future. The EJ&E Railway is being evaluated as a potential new rail service, sometime in the future. The EJ&E Railway is primarily a single-track line with numerous sidings and diverse road/rail crossings. With the exception of the segment between Aurora and Barrington, station locations have not been identified. However, 34 possible station locations have been proposed. Metra is still undecided between two

**Table 17**  
**Summary of Previous and Concurrent Planning Studies Relevant to U.S. 12**

Study, Plan, or Report	Source
<b>Transportation Planning Studies</b>	
• CATS 2010 Transportation System Development Plan	CATS
• Combined Location/Design Report and Environmental Assessment, U.S. 12 from Illinois 31 to Wisconsin State Line (1988)	IDOT
• Site Plan, Lake Zurich Theaters, Lake Zurich, Illinois (1992)	Lake Zurich
• Project Report, Categorical Exclusion Type III, U.S. 12 Gilmer Road to Pistakee Lake Road (1985)	IDOT
• Traffic Impact Study, U.S. 12 from Old Rand Road to Cuba Road	Lake Zurich
• Fox Valley Freeway Corridor Feasibility Study, Project Information Brochure (1992)	IDOT
• Traffic Impact Study for a Proposed Housing Development, Euclid Ave from U.S. 12 to Meadow	Mount Prospect
• Site Plan, Lakemoor Illinois, Homart Developer	Homart
<b>Land Use and Comprehensive Plans</b>	
• Comprehensive Master Plan (1991) Zoning Map	Fox Lake Fox Lake
• Year 2010 Comprehensive Land Use Plan (1989) Zoning Map	Spring Grove Spring Grove
• Comprehensive Plan Update (1988) Zoning Map (1991)	Hawthorn Woods Hawthorn Woods
• Comprehensive Plan (1981) Comprehensive Subdivision Map (1991)	Deer Park Deer Park
• Comprehensive Plan Update (1989) Zoning Map	North Barrington North Barrington
• Comprehensive Plan (1990) Zoning Map (1991)	Palatine Palatine
• Comprehensive Plan Arlington Heights Thoroughfare Policy Plan Zoning Map	Arlington Heights Arlington Heights Arlington Heights
• Comprehensive Plan Zoning Map	Mount Prospect Mount Prospect
• Zoning Map	Des Plaines
• McHenry County Land Use Plan (2010 Updated)	McHenry County Regional Planning Commission
• Comprehensive Plan (1989 Updated) Comprehensive Plan (1989 Revised)	Village of North Barrington Village of Lake Barrington
• McHenry County Township Zoning Map (1982 Updated)	McHenry County Regional Planning Commission
• Lake County Framework Plan (1989)	Lake County

**Table 18**  
**Future Transit Facilities and Operations**  
**Proposed and/or Planned by Others for U.S. 12**

Transit Facility or Route	Location	Status/Comment
C&NW/Northwest Line—Richmond Extension (McHenry Branch)	From McHenry to Richmond along Illinois 31	Proposed extension of Metra commuter service to Richmond and nearby towns
EJ&E	Crosses in Lake Zurich, just east of Ela Road	Proposed circumferential Metra commuter line; Potential station at Ela Road/U.S. 12
Middle Circumferential Corridor	Crosses at approximately Palatine Road	Major project transit line connecting west and north suburbs
Wisconsin Central	Crosses in Des Plaines, 1 block north of Illinois 58 (Golf Road)	Proposed new Metra commuter line between Antioch and Franklin Park; Proposed nearby stations in Prospect Heights and Wheeling

proposed station sites for the EJ&E near the U.S. 12 corridor. One choice is the intersection of Ela Road and U.S. 12 in Lake Zurich. The other choice is just north of Illinois 22 in Lake Zurich. This project is part of Metra’s year 2010 transportation plan, and is considered long range.

According to Metra’s “Project Proposal,” new Metra service extending northwards along the Wisconsin Central Line (formerly Soo Line) is planned, and funding has been approved for this new rail service. This line will serve peak hour commuting between the north suburbs and the Chicago Central Business District and eventual hourly commuting between the north suburbs and O’Hare Airport. This service will be limited to three peak-hour trains during its early stages. Additional trains may later provide expanded service. Metra’s routing of this line is to extend it from Des Plaines along Wisconsin Central right-of-way (formerly Milwaukee Road) into Union Station. Northward from Des Plaines, the commuter service is expected to terminate in Antioch. This new facility will provide 33 miles and 11 stations. Among the 11 proposed stations, Prospect Heights and Wheeling are located closest to the corridor.

Another proposed transit project is the Middle Circumferential Corridor. This is a major project transit line connecting the west and north suburbs. This facility would be expected to connect suburban population centers with suburban office centers and

shopping malls. In addition, inter-connections to five existing and three proposed commuter lines serving suburb to suburb, inbound, and reverse commuting are intended. The facility is proposed to cross U.S. 12 at approximately Palatine Road.

There are no new bus routes planned for U.S. 12. However, the proposed U.S. 12 plan, described in Chapter IV, identifies and recommends specific improvement (i.e., future stops, shelters, etc.) along the corridor.

## **Future Land Use and Development**

Information regarding existing and future land use plans was obtained from field observations, input from the U.S. 12 Advisory Panels, and from the various communities, regional organizations, and counties that U.S. 12 serves (see Table 18).

### **Future Conditions**

Existing and future land use varies along the U.S. 12 corridor. To the north, the open space is expected to be maintained, and environmentally sensitive areas are expected to remain unchanged. The more dense commercial areas are located where U.S. 12 bisects communities such as Fox Lake, Lake Zurich, Palatine, Arlington Heights, Mt. Prospect, Prospect Heights, and Des Plaines. Notable areas where land use would be expected to intensify and/or evolve are located primarily between Illinois 134 and Lake-Cook Road. Areas of particular interest include:

- Within Spring Grove, adjacent to U.S. 12, land use is expected to intensify, primarily with light industrial and residential development.
- South of Illinois 134 to south of Illinois 120, commercial land use is being planned in the existing open areas. South of Illinois 120, adjacent to the west side of U.S. 12, development of a regional shopping center is currently proposed. This could serve as a catalyst to future commercial development along other nearby segments of U.S. 12.
- Although future land use and zoning plans were not available along U.S. 12 through Lakemoor and Wauconda, it is reasonable to assume that

future development in this area will intensify in commercial and residential uses.

- The area between Long Grove Road to south of Lake-Cook Road is expected to evolve and redevelop in some areas. Many of the existing properties in this area are “out of business” or vacant.
- South of Lake-Cook Road to Golf Road, the land use through this area is relatively mature. It is anticipated that this area will continue to develop and evolve.
- Other specific planned development areas along the corridor were considered in the development of the proposed corridor plan. This includes the potential for development on the east side of U.S. 12 south of Old Rand Road. Another specific site considered was the newly-constructed theater property south of Ela Road on the west side of U.S. 12.

The following is a summary of key constraints and unique conditions described in Chapter II. Such constraints influenced the development of the overall concept for the U.S. 12 corridor.

### **Existing Environmental Constraints, Unique Conditions, and Areas of Concern**

#### **Illinois 31 to State Park Road**

This segment of U.S. 12 contains some of the most sensitive environmental areas along the corridor. The meandering Nippersink Creek results in a number of U.S. 12 creek crossings. Numerous wetlands associated with Nippersink Creek also border the roadway within this segment. There are a few sections of U.S. 12 that lie within, or are adjacent to, the existing floodplain/floodway. The McHenry Conservation District represents another significant environmental concern.

The terrain adjacent to U.S. 12 is critical in some locations. Steep sideslopes (cut and fill sections) limit the availability of future right-of-way.

## **State Park Road to Illinois 59**

Environmental constraints along this segment are associated with the Nippersink Creek and Pistakee Lake. The existing structure over U.S. 12 is a five-lane structure paralleled by a structure carrying the railroad. Modification of the U.S. 12 structure, including widening, could result in significant adverse environmental impacts. This segment includes the central business district of Fox Lake, through which right-of-way is severely limited and intensive development is adjacent to the corridor. Furthermore, there are a number of access points and driveways serving development along U.S. 12. This area is also unique because it serves as the focal point of many recreational activities and, therefore, is the destination of a substantial amount of recreational and seasonal traffic. This seasonal traffic and the frequency of access points along U.S. 12 adversely affects the operation of U.S. 12 through the Fox Lake region in peak and off-peak periods.

## **Illinois 59 to Bonner Road**

Environmental concerns along this segment of U.S. 12 are associated with wetlands directly adjacent to U.S. 12. Wetlands are particularly prevalent north of Illinois 120 and in the vicinity of Case Road. There are also segments of U.S. 12 that lie within existing floodplains/floodways, which becomes a concern should U.S. 12 be widened. A unique concern to this segment is the location of Big Hollow School relative to potential development. Future plans to develop commercial properties, especially shopping centers, must accommodate the safe interaction of pedestrians between these land uses. In general, the availability of right-of-way does not represent a significant concern within this segment.

## **Bonner Road to Miller Road**

Between Bonner Road and Miller Road, there is sufficient existing right-of-way to accommodate the typical suburban SRA cross section. Environmental constraints along this segment are wetlands, the majority of which are located south of Bonner Road and in the vicinity of the Illinois 59 interchange. Detailed field studies will be required to determine the extent to which these wetlands encroach into existing IDOT right-of-way. Other constraints include segments of U.S. 12 that lie within the floodplain/floodway. The frequency of access and egress points along U.S. 12 between Lake Shore Drive and Miller Road also constitutes a concern. Another concern unique to this segment includes

the existing driveway access points permitted onto the interchange ramps at Illinois 176 and Illinois 59.

### **Miller Road to Lake-Cook Road**

Between Miller Road and Ela Road, there are multiple access points that may affect the operation of U.S. 12. The Pleasant Acres Park is located north of Illinois 22 on the east side of U.S. 12, and other environmental concerns are associated with wetlands.

Wetlands are located between the EJ&E Railway and Old Rand Road, and just north of Quentin Road. Multiple access points also represent a concern from Long Grove Road to Lake-Cook Road, where the proximity of existing land use limits right-of-way. This segment also has four identified LUST sites proximate to the roadway.

### **Lake-Cook Road to Golf Road**

This segment includes dense commercial and residential development over its entire length, which limits available right-of-way. Access control and management along U.S. 12 are limited, allowing a significant number and closely-spaced driveway access points that degrade operations from Lake-Cook Road to Golf Road. There are also numerous sensitive land uses that must be considered, including, but not limited to, the Randhill Park Cemetery, the golf courses north of Euclid Avenue, and the Cook County Park District property north of Golf Road. Other areas of concern include the detention ponds/wetlands north of Chestnut Avenue along the east side of U.S. 12, and the bike path that crosses U.S. 12 at Wolf Road.

## **Community Concerns, Interests, and Attitudes**

The interests of the communities through which U.S. 12 passes are important factors in the development of a reasonable, feasible consensus plan for the U.S. 12 SRA corridor. Two U.S. 12 corridor Advisory Panels were established, comprised of elected officials and technical staff from the counties and communities along U.S. 12. Three rounds of panel meetings were held to present SRA concepts and to discuss the corridor and its recommended draft plan and report, and to provide the IDOT consultant with background on community interests, concerns, etc.

Chapter V contains minutes from the three sets of meetings, held on October 1 and 11, 1991; March 10 and 11, 1993; and October 13 and 14, 1993. The following is a summary of key concerns discussed during these meetings:

- There were discussions regarding the proposed Illinois 53 (FAP 342) extension. Concerns were voiced that this corridor would help serve north-south traffic using U.S. 12 through Lake County. There were concerns that U.S. 12 with improvements would not be able to accommodate traffic in the region without FAP 342.
- There were questions regarding the plan's attention to major developments in the region (specifically, plans for a major regional shopping center in Lakemoor at U.S. 12 and Illinois 120).
- Some panel members questioned how they are to convince or prohibit developers from developing their properties adjacent to the existing right-of-way line. Discussions focused on the need for right-of-way preservation.
- Concerns were expressed regarding the potential for "devaluing" properties as a result of right-of-way taking, even strip taking. Furthermore, there were discussion related to what would occur if right-of-way taking results in forcing a property into non-compliance with various ordinances.
- There were concerns over how the rural-type SRA could possibly be implemented north of Fox Lake, due to steep sideslopes, the proximity of the existing railroad, and the environmentally sensitive areas.
- Lake Zurich was concerned with the operation and safety of the U.S. 12 intersection with Illinois 22. Discussions over the need and feasibility of an interchange were reviewed.
- The Ryan Theater property was discussed. Concerns were expressed regarding the northbound U.S. 12 traffic into the property. This traffic, currently prohibited from turning left from U.S. 12, is continuing past the

theaters and turning around in downstream land uses in order to access the theater.

- There was considerable discussion with panel members with respect to the implications of implementing a raised median. Concerns were focused on how existing access into land uses and cross streets would be maintained.
- Panel members were concerned and interested in how pedestrians would be accommodated along SRAs. There was discussion regarding recommendations of pedestrian overpasses/underpasses, etc.

The input received from all these sources was taken into account in the production of this final report and the recommended plan presented in Chapter IV.

### **Recommended SRA Corridor Concept for U.S. 12**

Based on the above input, the recommended corridor concept illustrated in Exhibit 5 was established for U.S. 12. The concept elements include basic number of through lanes, intersection and interchange requirements, access control and median treatments, and special design features.

#### **Basic Number of Lanes**

The importance of U.S. 12 is heightened by its significant regional continuity. From Wisconsin, south, U.S. 12 offers a unique, continuous route for more than 40 miles (38 as an SRA). The closest alternative route or nearby freeway or toll facility is I-94/I-294, which is between 1 and 17 miles to the east. The only continuous SRA that is roughly parallel to U.S. 12 is U.S. 14 (Northwest Highway) which is between 1 and 20 miles to the west. Furthermore, U.S. 12 serves the rapidly developing areas within Lake and portions of McHenry Counties.

For the northern 7 miles of the U.S. 12 SRA, north of Spring Grove, the need for a future continuous four-lane facility is evident. Through most of this segment the existing right-of-way ranges from 80 to 110 feet of right-of-way, considerably less than the required right of way for a rural SRA. Due to the limited existing right-of-way and the

relative inability of acquiring additional right-of-way, it is recognized that developing a four-lane rural cross section is not practical. In an effort to develop a continuous four-lane facility, special cross section treatments will be necessary.

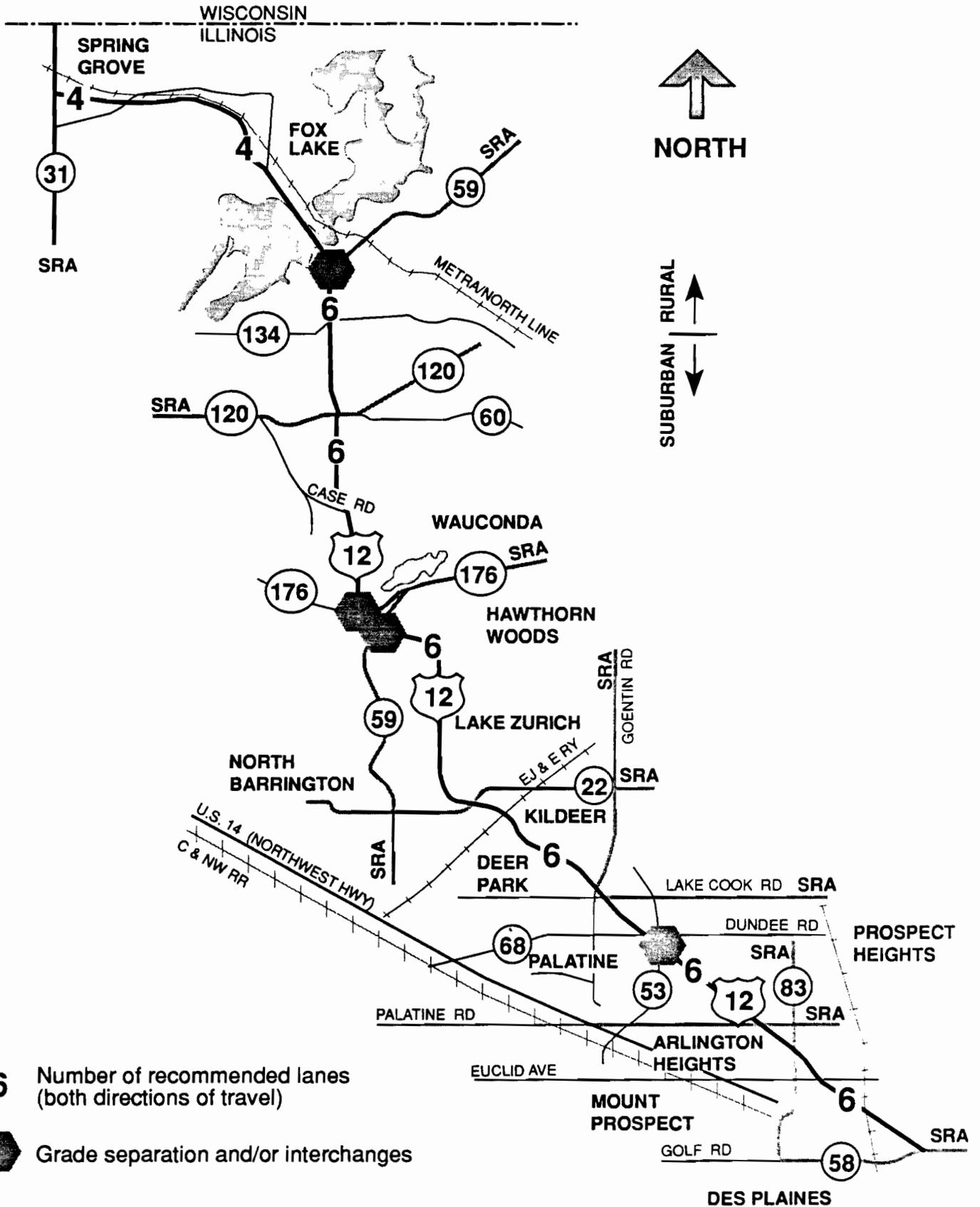
Similarly, through Fox Lake, the development of a rural four-lane cross section would be impractical. Restricted right-of-way and the magnitude and proximity of existing land use relative to the U.S. 12 corridor preclude implementing an open drainage rural type cross section. Therefore, through Fox Lake, the existing four basic lanes will be maintained.

South of Fox Lake to Lake-Cook Road, the existing right-of-way is less constrained (right-of-way ranges between 130 to 300 feet). Implementation of a continuous six-basic-lane cross section, is recommended. South of Lake-Cook Road, the existing right-of-way is 100 feet. U.S 12 along this segment is considerably more constrained; however, it is essential to extend the six-lane cross section through this segment. To accommodate six basic lanes along this segment, special median treatment and roadside design will be necessary. The use of standard lane widths less than 12 feet is also necessary to implement the six-lane plan with minimal impacts to adjacent right-of-way. This will provide a continuous six-lane SRA between Fox Lake and the Des Plaines (approximately 28 miles).

Based on the above, it is recommended that U.S. 12 be designed as a continuous four-lane arterial between Illinois 31 and Illinois 59 and a continuous six-lane arterial from Illinois 59 to Illinois 58 (Golf Road). Specific cross section designs and treatment are discussed in Chapter IV.

## **Intersection and Interchange Improvements**

A more cost-effective and less disruptive strategy (in terms of overall effects) for SRA corridor improvements focuses on the major intersections. Maintaining reasonable average speeds and achieving peak period levels of service per SRA criteria will require capacity upgrading of most intersections along U.S. 12. Spot widening (requiring additional right-of-way) for double left-turn lanes and for right-turn lanes will be essential elements of the overall corridor concept, particularly at the intersections of U.S. 12 and other SRAs (see Exhibit 5).



# RECOMMENDED SRA CORRIDOR CONCEPT U.S. 12

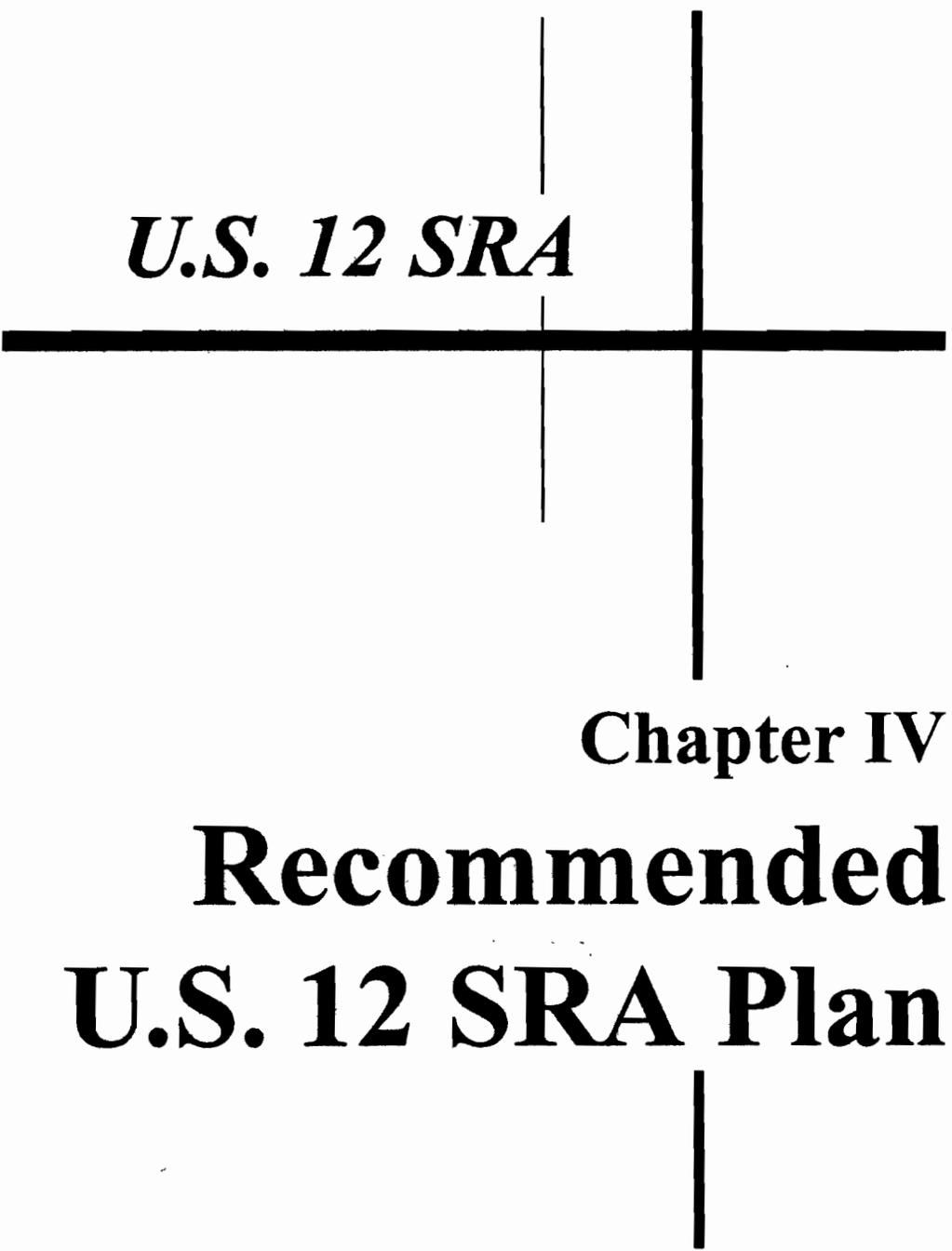
At certain specific locations, new interchanges will be evaluated for feasibility and existing interchanges will be improved/upgraded. These locations include the existing interchanges at Illinois 176, Illinois 59, and Illinois 53. Also, an additional location, U.S. 12 and Illinois 22, is noted in Chapter IV for special interchange or grade separation consideration. Other locations considered for interchanges but rejected due to feasibility include Lake-Cook Road and Palatine Road.

## **Access Control**

The frequency and spacing of full access points and the locations of signalized intersections are important considerations in operating the recommended SRA arterial. The U.S. 12 corridor concept calls for implementing a raised or barrier median wherever feasible. The raised median enables strict and safe control over left-turn in/out movements, thereby optimizing the capacity of the four-lane and six-lane sections.

Recommended median treatments vary along the corridor, including open, wide medians as well as raised barrier medians and flush medians. Maintaining a median of sufficient width to shelter left-turn movements is essential throughout the entire corridor. Where a median would be insufficient to provide for left-turn protection, left turns will be prohibited along U.S. 12.

Chapter IV discusses in detail the proposed plan for implementing the SRA concept for U.S. 12.



*U.S. 12 SRA*

**Chapter IV**

**Recommended  
U.S. 12 SRA Plan**

## Chapter IV

# Recommended U.S. 12 SRA Plan

This chapter describes in detail the recommended plan for the U.S. 12 SRA corridor. For clarity, the discussion has been divided into the previously-defined segments noted in Chapter II (see page II-1). Specific geometric and/or operational recommendations, and unique features or special roadway designs are presented.

The plan is supplemented by an evaluation of the operational characteristics of the plan (i.e., level of service and operating speed under future traffic conditions). In addition, a planning-level opinion of potential construction and right-of-way acquisition costs is presented for each segment of the corridor. All costs are based on unit, generalized costs as furnished by the IDOT for SRA planning purposes.

Right-of-way costs are based on a general assessment of acreage required based on the proposed typical section, existing right-of-way, and current unit costs of right-of-way acquisition as furnished by the IDOT. In general, specific building acquisitions and/or damages are not identified. Actual right-of-way acquisition, damages, or both would be determined during Phase I studies.

Construction costs reflect the general magnitude of the proposed SRA relative to the existing roadway. Quantities were estimated on a per-mile basis, with provisions for major items such as new bridges, interchanges, and major intersection improvements.

The exhibits that accompany each segment discussion present the layout of the proposed roadway in relation to the existing roadway. The traveled way (i.e., edge of pavement to edge of pavement) is highlighted in the plan. Additional right-of-way required, lane arrangements at intersections, locations of proposed and existing signals, and proposed cross section also are shown.

## **Segment I—“Spring Grove” (Illinois 31 to State Park Road)**

Segment I travels from Illinois 31 (SRA) south to State Park Road (McHenry-Lake County border), a distance of approximately 7.0 miles. It includes U.S. 12 through McHenry County as well as the communities of Solon Mills and Spring Grove. The U.S. 12 proposed plan for this segment is depicted in Exhibits C-1 through C-3 and a portion of C-4.

### **Cross Section and Geometric Characteristics**

The recommended cross section within this segment recognizes the need to minimize additional right-of-way and reduce impacts to environmentally sensitive areas. As a result, the recommended cross section would be constructed as an urban-type cross section. Cross-sectional features would consist of four lanes (two lanes in each direction of travel), closed drainage with curb and gutter, and a continuous raised median to provide protection for left turning vehicles. The cross sections recommended can be constructed within 80 to 110 feet of right-of-way.

For the section south from Illinois 31 the proposed four-lane cross section would include an 18-foot raised median. Widening would occur about the existing centerline to a point approximately 2,700 feet north of North Solon Road. The required right-of-way would be 100 feet, requiring an additional 10 feet from both sides of U.S. 12. At this point, U.S. 12 widening would be shifted to the west, maintaining the existing right-of-way line on the east side. This would avoid encroachment into the automobile salvage yard (a potential hazardous material site) located along the east side of U.S. 12. Acquisition of 30 feet of additional right-of-way along the west side of U.S. 12 would be anticipated.

South of North Solon Road the proposed four-lane cross section would be narrowed, with an 8-foot raised median to north of May Lane. Widening would occur about the existing centerline. The proposed cross section could be constructed within the existing 80 feet of right-of-way. This special cross section design is intended to minimize impacts to the environmentally sensitive areas, including wetlands and the McHenry Conservation District, adjacent to U.S. 12. Left-turn movements from U.S. 12 into driveways along this segment would be prohibited due to the lack of left-turn protection.

From north of May Lane to south of Johnsburg Wilmot Road, the proposed four-lane cross section would be expanded to provide an 18-foot raised median. Right-of-way (110') along this segment is sufficient to accommodate the proposed cross section. Widening would occur about the existing centerline.

South of Johnsburg Wilmot Road to north of Fox Lake Road, the proposed cross section again would be narrowed, reducing the raised median to 8 feet. This cross section is intended to fit within the existing right-of-way dimension and to mitigate impacts to wetlands associated with the Nippersink Creek and McHenry Conservation District. It should be noted that future studies may identify the need for retaining walls along U.S. 12 to ensure encroachment into these sensitive areas does not occur. Cost of future retaining walls was not included in the cost estimates provided in Table 19. Note that at the intersection of Sunset Road the 8-foot median would be widened to provide left-turn protection to westbound Sunset Road.

<p align="center"><b>Table 19</b>  <b>Opinions of Construction and Right-of-Way Cost for</b>  <b>SRA Improvements Along U.S. 12—Segment I</b>  <b>(1991 Dollars)</b></p>	
Roadway Reconstruction	\$26,230,000
Intersections/Interchanges (Illinois 31 [SRA], East Solon Road, Sherwood Forest Dr., Richardson Rd.)	1,300,000
Structures and Retaining Walls (Nippersink Creek)	1,390,000
Other	-0-
Subtotal	28,920,000
Right-of-Way	540,000
<b>TOTAL</b>	<b><u>\$29,460,000</u></b>

At Fox Lake Road, the cross section ties to the existing four-lane cross section with a 10- to 12-foot flush median. This median allows for protected left turns in both directions at intersections and driveways.

Other geometric improvements include the reconstruction of the Kuhn Road intersection. Kuhn Road would be moved further to the south to eliminate the undesirable skew angle and form a conventional right angle intersection. Relocating Kuhn Road will require construction of a new at-grade crossing of the CMSTP&P railroad. The proposed plan also recommends removing the existing intersection of U.S. 12 and North Solon Road. North Solon Road should be relocated to intersect at right angles with East Solon Road. This relocation is recommended to remove the two closely-spaced intersections of North Solon Road and East Solon Road. Within Spring Grove, future access roads are proposed between Sherwood Forest Drive and Winn Road. These roads would provide access to future development, with access to U.S. 12 through the intersections at Sherwood Forest Drive, Industrial Court, and Winn Road. The exact location of where these roadways should be implemented will be determined in Phase I studies.

This segment of U.S. 12 lies adjacent to or within many existing floodplains/floodways. Sensitive areas include crossings of the Nippersink Creek south of Illinois 31 and south of North Solon Road, as well as areas south of Sunset Road in the area of the McHenry Conservation District. Future studies will need to be performed in an effort to determine the impacts of the proposed new cross sections. The effects of U.S. 12 improvements on the floodways/floodplains would primarily be associated with filling of the regulatory floodplain, the consideration of local ordinances in mitigating effects, the potential increase in the backwater due to roadway geometrics, and opening up of structures where the backwater could potentially results in flood damages. Other areas of concern include the U.S. 12 widening adjacent to wetlands or other environmentally sensitive areas. The initial runoff from the pavement can be controlled and retained if necessary. For each of these sensitive areas direct discharge from the roadway should be avoided or minimized. Storm water detention could also be accomplished by over-sizing the closed drainage system.

## **Traffic Control, Operations, and Safety**

The rural character of U.S. 12 and environmental characteristics of adjacent land, defines the extent of safety and operational improvements within the recommended SRA plan.

The SRA plan includes traffic control at intersections, spacing of intersections, and expected safety and operational effects associated with upgrading the existing two-lane roadway. It is essential that the SRA corridor plan establish a long-range framework that reinforces the operational and safety objectives of the SRA system. The keys to establishing this framework are the location of future signals and the maintenance of median access control.

The diagrams along the top of each SRA plan exhibit indicate locations of existing and potential signalized intersections, the lane arrangements at these locations, and spacing to adjacent signals. Locations of future signals were identified based on existing and future land use, safety and operational considerations, and overall system needs. The plan indicates the locations of median access breaks. Where a break is not shown, it is the intent of the plan that vehicles entering or exiting driveways or other existing and future access points be restricted to right-in and right-out movements only.

The traffic control plan for Segment I calls for retention of the existing signal at the SRA to SRA intersection of U.S. 12 and Illinois 31. Furthermore, because this is an SRA to SRA intersection and the marked U.S. 12 route turns to the north at the Illinois 31 intersection, capacity improvements at this intersection are recommended. Refer to the intersection detail in Exhibit D-1. Recommended capacity improvements include providing a dual left turn along Illinois 31 and right-turn lanes on all approaches. This would facilitate the north to west U.S. 12 movement. Through Spring Grove the traffic control plan calls for retaining the existing signal at Winn Road and proposes potential signals at Sherwood Forest Drive and at Richardson Road. Within Solon Mills, planning for a potential new signal is also recommended at the intersection of East and West Solon Roads with U.S. 12. For new signal locations, SRA guidelines for signal spacing were referenced with local network considerations, future land uses, and other constraints that fit the locations. These new signals provide left-turn protection and meet SRA desirable signal spacing guidelines. South of Spring Grove the signals at Johnsbury Wilmot Road and Fox Lake Road will be maintained.

The exhibits also indicate locations of proposed median openings. SRA design criteria specify that these openings be no closer than 1/2 mile apart. Recommended median openings are shown relative to existing land uses given these criteria. Where an existing driveway accesses U.S. 12 and no opening is shown, it is the intent of the plan that the driveway accommodate right-in/right-out movements only.

The traffic control and geometric plan for Segment I should result in significant improvements to safety as well as traffic operations. The proposed four-lane divided cross section as well as the proposed intersection improvements will provide increased arterial and intersection capacity. Furthermore, the raised median and the locations of existing and future signals will enhance existing and future traffic operations by controlling access along U.S. 12. The long-range ADT forecast volume of up to 11,500 vpd can be accommodated at better than level of service C.

To verify the reasonableness of the recommended improvements, a planning-level intersection capacity analysis was performed. Table 20 shows the results of that analysis for all future signalized intersections along U.S. 12. The analysis utilizes CATS year 2010 SRA forecast traffic volumes as a general reference. As noted in the table, assumptions for unavailable minor crossroad traffic volumes were made. Other capacity analysis assumptions are detailed in Appendix A.

The capacity analysis indicates that the recommended plan should produce acceptable volume to capacity (v/c) ratios for Segment I, which in turn, would produce high levels of service during peak periods. Calculated intersection v/c ratios were all below 0.80, with the highest v/c ratio (0.76) reported at Johnsbury Wilmot Road.

In terms of safety the four-lane divided cross section will provide a safer cross section design than the existing two-lane cross section. The existing two-lane highway functions in a typical manner, with accident rates on the order of 2.0 to 4.6 accidents per MVM. See Exhibits A-1 through A-3. Rates for four-lane divided highways are typically 40 to 50 percent lower. The addition of a raised median and turn lanes in the proposed cross section will provide separated traveled ways, thus minimizing the potential for severe head-on or side-swipe accidents. In addition, left-turn protection is provided for all left turning traffic, minimizing the chance for rear-end accidents resulting from left-turn vehicles obstructing the through-traffic lane.

## **Public Transportation**

As discussed in Chapter II, public transportation facilities do not operate in this segment. However, the C&NW/Northwest Line, along with other Metra lines, is being evaluated for service extensions. Metra is evaluating extending the McHenry Branch of this line to Richmond (just two miles south of the Wisconsin border). In addition, signs are needed to direct commuters to the Metra Stations. A uniform sign system providing directional

**Table 20**  
**Evaluation of Signalized Intersection Operations Along**  
**Segment I (Illinois 31 to State Park Road) of U.S. 12**

Intersection of U.S. 12 and:	Lane Arrangements <sup>b</sup>		Year 2010 ADT (vpd) <sup>c</sup>		v/c for Intersection <sup>d</sup>
	SRA	Crossroad	SRA	Crossroad	
Illinois 31* <sup>a</sup>	L-TT-R	LL-TT-R	9,300	12,000	0.25
East/West Solon Road <sup>a</sup>	L-T-TR	L-TR	8,000	5,000	0.32
Sherwood Forest Dr. <sup>a</sup>	L-T-TR	L-TR	8,000	5,000	0.32
Winn Road <sup>a</sup>	L-T-TR	L-TR	11,000	12,000	0.67
Richardson Road <sup>a</sup>	L-T-TR	L-TR	11,500	12,000	0.68
Johnsburg Wilmot Road <sup>a</sup>	L-T-TR	L-TR	15,700	12,000	0.76
Fox Lake Road	L-TT TT-R	L-R	15,700	5,000	0.46
State Park Road <sup>a</sup>	L-T-TR	L-TR	25,500	5,000	0.71

**Note:**    <sup>a</sup>Denotes SRA corridor.  
<sup>a</sup>Assumed for unavailable volumes: 20,000 vpd for major arterials, 12,000 vpd for minor arterials, and 5,000 vpd for local roadways.  
<sup>b</sup>L = Left-turn lane; T = through lane; R = right-turn lane; and TR = through and right-turn lane.  
<sup>c</sup>ADT = Average Daily Traffic.  
<sup>d</sup>v/c = Volume to Capacity Ratio.

signs to these facilities should be established on all SRA routes. This is true of potential future facilities as well. At the intersection of Illinois 31 and U.S. 12, directional signing should be provided to the C&NW/Northwest Line/McHenry Branch/Richmond Extension at the Richmond Station.

The plan also identifies the location of future park-n-ride or kiss-n-ride facilities. These facilities should be equipped to accommodate busses, carpools, and vanpools. A uniform sign system should be established. Along this segment of U.S. 12 space should be reserved for a future park-n-ride/kiss-n-ride facility near the intersection of U.S. 12 and Illinois 31. This would serve traffic along Illinois 31 as well as U.S. 12. Currently, Pace does not operate bus routes, or plan to operate bus routes along the corridor within

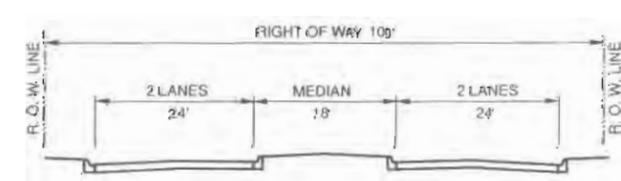
this segment. However, as population and development increase, bus routes may be warranted. In the event of future bus routes, the plan identifies the location of future bus stops, shelters, and turnouts. These locations are consistent with SRA rural and suburban and Pace guidelines.

### **Construction and Right-of-Way Costs**

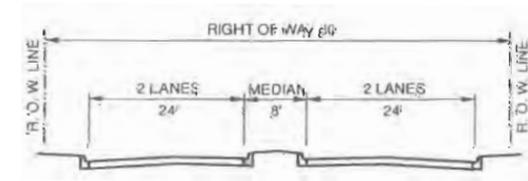
The consultant's opinion of the total cost of the recommended plan for Segment I is \$29.46 million in 1991 dollars (see Table 19). This total includes roadway reconstruction costs, structural costs, and right-of-way acquisition costs. Structure costs include the widening of structures over the Nippersink Creek, estimated to be \$1.4 million. The roadway construction cost is estimated to be \$26.33 million, which includes improving U.S. 12 from a two-lane roadway to a continuous four-lane roadway with a variable median. Other construction costs include intersections improvements and/or signalization of intersections. The right-of-way acquisition cost is based on the estimated costs of the various types of land uses that would need to be acquired. It is estimated that 9.8 acres of right-of-way will need to be acquired at a cost of \$600,000.



- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP



ROADWAY SECTION A-A  
IL 31 TO NORTH OF EAST SOLON RD

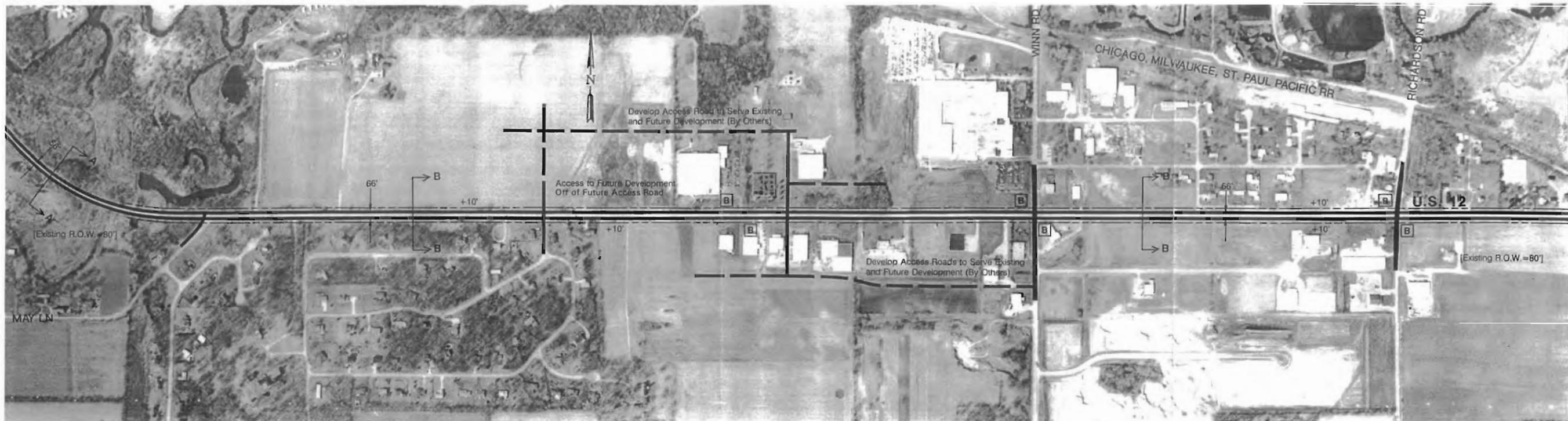
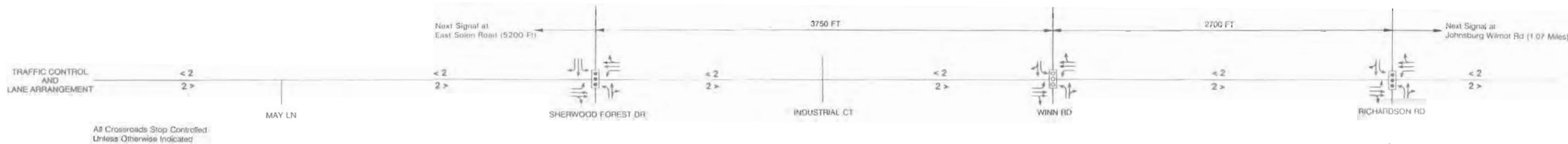


ROADWAY SECTION B-B  
SOUTH OF EAST SOLON RD

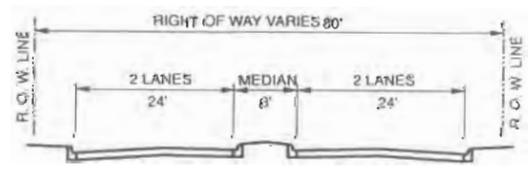
# U.S. 12 - PROPOSED PLAN

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION

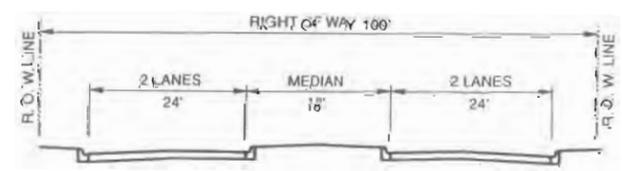




- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP (Recommended Bus Stops Include Bus Stops on Existing Routes and Future Routes)



ROADWAY SECTION A-A  
WEST OF MAY LN

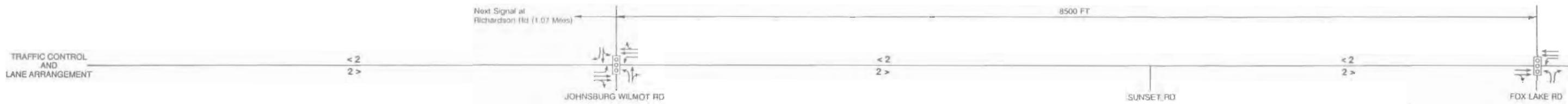


ROADWAY SECTION B-B  
MAY LN TO EAST OF RICHARDSON RD

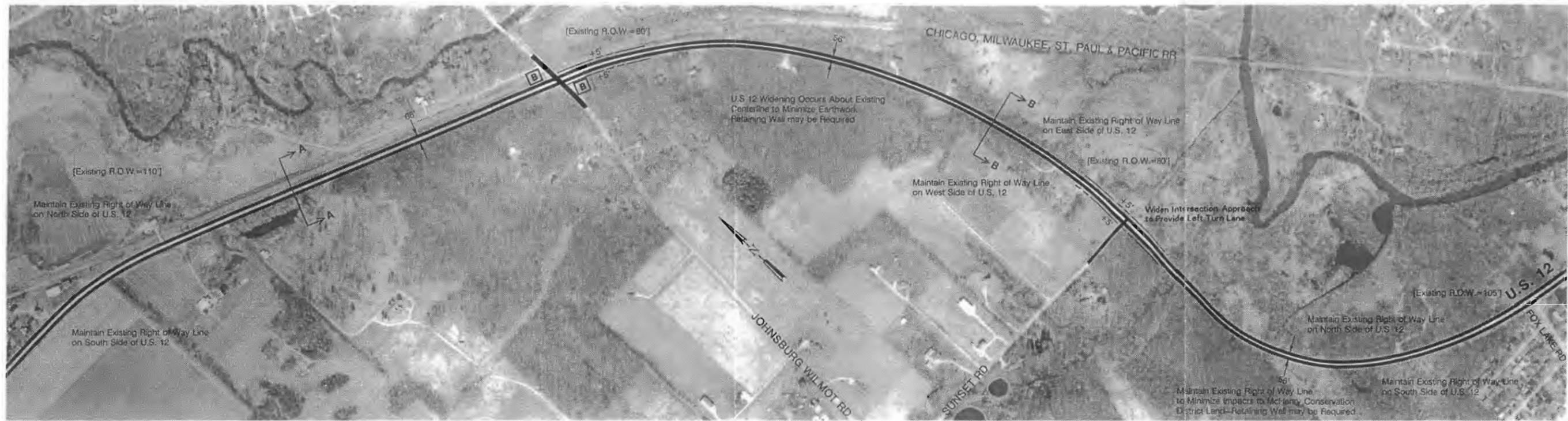
**U.S. 12 - PROPOSED PLAN**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION



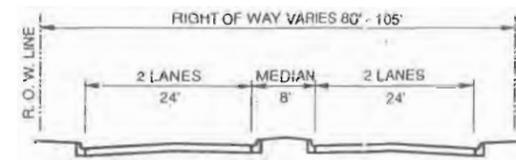
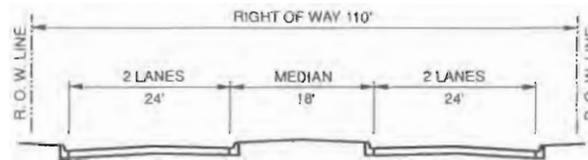


All Crossroads Stop Controlled Unless Otherwise Indicated



**LEGEND**

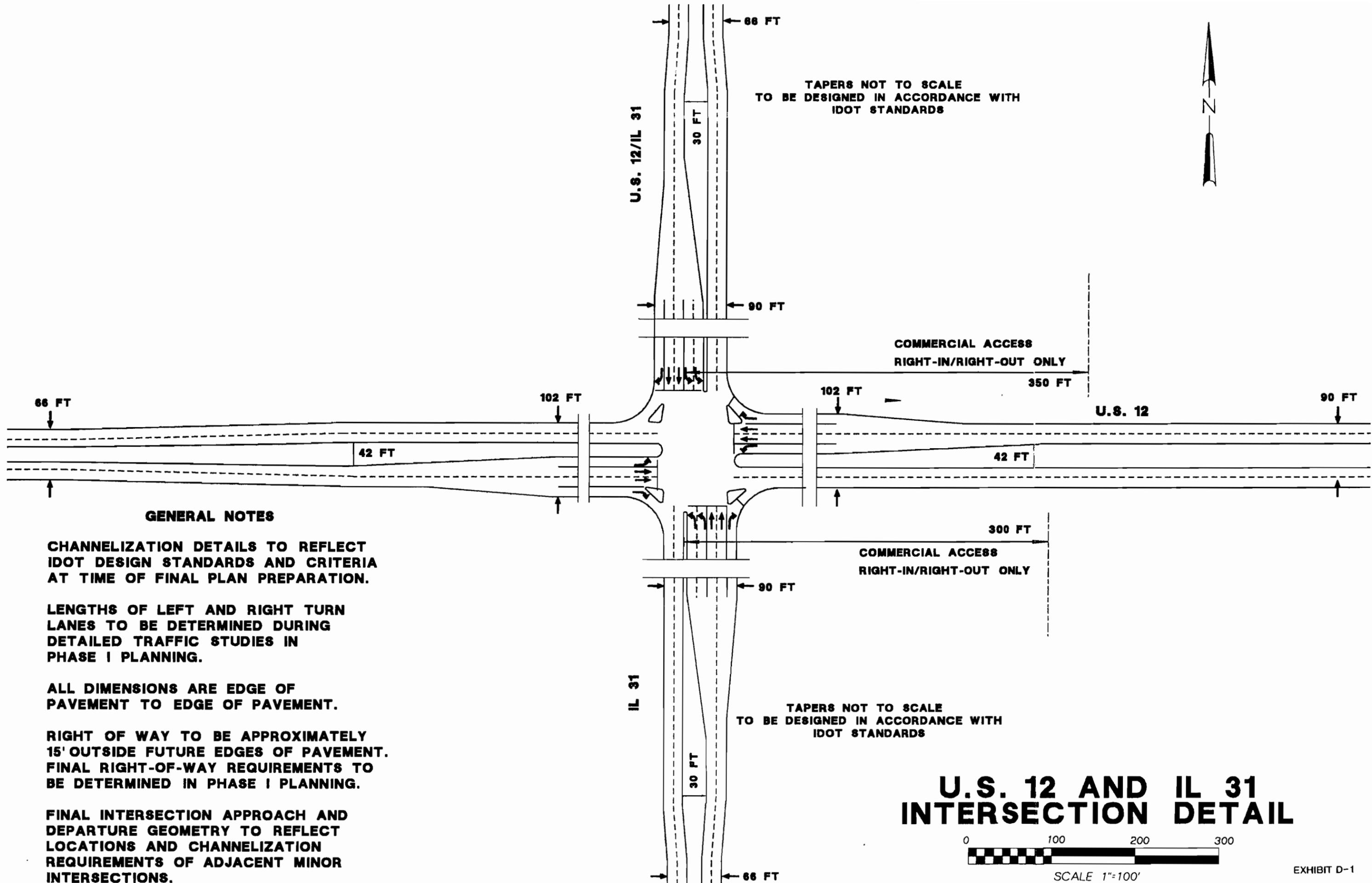
- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
 METRO Transportation Group and EJM Engineering  
 ILLINOIS DEPARTMENT OF TRANSPORTATION





**GENERAL NOTES**

**CHANNELIZATION DETAILS TO REFLECT IDOT DESIGN STANDARDS AND CRITERIA AT TIME OF FINAL PLAN PREPARATION.**

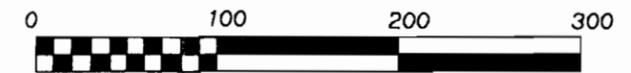
**LENGTHS OF LEFT AND RIGHT TURN LANES TO BE DETERMINED DURING DETAILED TRAFFIC STUDIES IN PHASE I PLANNING.**

**ALL DIMENSIONS ARE EDGE OF PAVEMENT TO EDGE OF PAVEMENT.**

**RIGHT OF WAY TO BE APPROXIMATELY 15' OUTSIDE FUTURE EDGES OF PAVEMENT. FINAL RIGHT-OF-WAY REQUIREMENTS TO BE DETERMINED IN PHASE I PLANNING.**

**FINAL INTERSECTION APPROACH AND DEPARTURE GEOMETRY TO REFLECT LOCATIONS AND CHANNELIZATION REQUIREMENTS OF ADJACENT MINOR INTERSECTIONS.**

**U.S. 12 AND IL 31 INTERSECTION DETAIL**



SCALE 1"=100'

## **Segment II—“Fox Lake”** **(State Park Road to Illinois 59)**

Segment II of the U.S. 12 SRA is approximately 3.0 miles long, extending from State Park Road (McHenry-Lake County Line) to Illinois 59 (SRA). This segment contains the Village of Fox Lake. The proposed plan for Segment II is depicted in Exhibits C-4 and C-5.

### **Cross Section and Geometric Characteristics**

The recommended cross section within this segment maintains the existing cross section features. There are two typical sections within this segment. The first typical section, extending south from State Park Road to approximately Kings Drive, includes four basic through lanes (two in each direction of travel), a 10- to 12-foot flush median, and closed drainage (i.e., curb and gutter). This cross section is constructed within 80 to 85 feet of right-of-way. The only exception is the structure crossing the Nippersink/Pistakee Lake, which is constructed within 64 feet of right-of-way. The second typical section is from south of Kings Drive to Illinois 59. This section includes the same four-lane cross section to the north. It also includes two-way frontage roads parallel to U.S. 12 on both the east and west sides of the corridor. This cross section is constructed within 170 to 300 feet of right-of-way.

Note that the existing cross section does not reflect the desirable cross-sectional characteristics of the rural SRA. The proposed plan maintains the existing cross section and does not propose changes to the typical cross section for the following reasons:

- The existing Nippersink/Pistakee Lake bridge has recently been reconstructed to accommodate five lanes. Reconstruction of this bridge in the future is unlikely, and reconstruction of this bridge to desirable rural SRA standards would have potentially significant environmental impacts.
- Widening the existing cross section to provide for a wider open median as well as open ditches along the outside of the roadway through Fox Lake would result in a significant number of commercial and residential acquisitions along both sides of U.S. 12 from south of the Nippersink Lake to Kings Drive.

- As discussed in Segment I, the proposed cross section to the north does not provide the desirable rural SRA cross section. Therefore, the existing cross section is compatible to the cross section proposed to the north.
- The existing cross section is compatible with the character of the existing land use. The existing flush median serves the numerous businesses and access points that are adjacent to the corridor.

A review of floodplain/floodway information within this segment identifies one floodplain along U.S. 12. This floodplain is located along the west side of U.S. 12 north of Lake Vista Drive. Maintaining the existing cross section should avoid any additional impact to existing drainage and avoid any additional fill into the floodplain.

### **Traffic Control, Operations, and Safety**

The character of land use along this segment of U.S. 12 as well as environmental constraints, define the extent of safety and operational improvements within the recommended SRA plan. The proposed SRA plan includes traffic control at intersections, spacing of intersections, and expected safety and operational effects associated with maintaining the existing four-lane cross section. It is essential that the SRA corridor plan establish a long-range framework that reinforces the operational and safety objectives of the SRA system. The keys to establishing this framework are the location of future signals and the maintenance of access controls.

The diagrams along the top of each SRA plan exhibit indicate locations of existing and potential signalized intersections, the lane arrangements at these locations, and spacing to adjacent signals. Locations of future signals were identified based on existing and future land use, safety and operational considerations, and overall system needs.

The traffic control plan for Segment II calls for retention of all existing signalized intersections. These include the signals at State Park Road, Grand Avenue, and Sayton Road. Left-turn protection is already provided at these existing signals. Capacity improvements, in the form of additional turn lanes at signalized intersections, do not appear to be necessary at these existing signalized intersections.

Two locations are proposed for potential future signals. A new signal is recommended at Kings Drive. This intersection would serve future activity adjacent to the corridor and would facilitate access to the two-way frontage roads parallel to U.S. 12. The next signalized intersection to the north would be located at Sayton Road, spaced approximately 2,800 feet. The next signal to the south would be at Illinois 134, more than 1 mile away. In conjunction with the proposed signalization of Kings Drive, the next unsignalized access point to the south would be restricted. At this location (see Exhibit C-5), cross-median access including left-turn-out movements would be prohibited. These movements would be efficiently and more safely served at the new signal at Kings Drive.

Note in Exhibit C-4 that alternatives have been developed for improving the Oak Street intersection with U.S. 12. The second proposed signal would be located at Oak Street. Alternatives have been developed to improve the substandard intersection geometry and improve sight distance. The alternatives shown in Appendix C relocate the Oak Street intersection to the south. Spacing of this intersection to the signalized intersection ranges from 1,320 to 850 feet depending on the alternative. The plan recommends that relocation of the Oak Street intersection be planned in conjunction with the redevelopment of land use to minimize impacts to existing commercial and residential properties. The spacing of the existing signalized intersection at Grand Avenue to any future signalized intersection at Oak Street is critical to the operation of U.S. 12 in this area. Therefore, any relocation of Oak Street should be no closer than 850 feet from Grand Avenue and preferably spaced  $\frac{1}{4}$  mile. As noted in the exhibits, all other crossing roadways would be stop controlled.

The proposed SRA plan includes incorporation of an access management plan. This is especially important along this segment of U.S. 12 where there is little capacity improvement and the existing flush median does not restrict cross-median access. Therefore, the long-range plan specifies consolidation of existing driveway access points where possible, as well as limitation of new access points onto U.S. 12.

The long-range ADT forecast volume of up to 25,500 vpd can be accommodated at a reasonable level of service. To verify the reasonableness of the recommended improvements, a planning-level intersection capacity analysis was performed. Table 21 shows the results of that analysis for all future signalized intersections along U.S. 12. The analysis utilizes CATS year 2010 SRA forecast traffic volumes as a general

reference. As noted in the table, assumptions for unavailable minor crossroad traffic volumes were made. Other capacity analysis assumptions are detailed in Appendix A.

**Table 21**  
**Evaluation of Signalized Intersection Operations Along**  
**Segment II (State Park Road to Illinois 59) of U.S. 12**

Intersection of U.S. 12 and:	Lane Arrangements <sup>b</sup>		Year 2010 ADT (vpd) <sup>c</sup>		v/c for Intersection <sup>d</sup>
	SRA	Crossroad	SRA	Crossroad	
Oak Street <sup>a</sup>	L-T-TR	L-TR	25,500	5,000	0.73
Grand Avenue <sup>a</sup>	L-T-TR	L-TR	25,500	12,000	0.98
Sayton Road <sup>a</sup>	L-T-TR	L-TR	25,500	5,000	0.73
Kings Drive <sup>a</sup>	L-T-TR	L-TR	22,200	5,000	0.64

Note: \*Denotes SRA corridor.

<sup>a</sup>Assumed for unavailable volumes: 20,000 vpd for major arterials, 12,000 vpd for minor arterials, and 5,000 vpd for local roadways.

<sup>b</sup>L = Left-turn lane; T = through lane; R = right-turn lane; and TR = through and right-turn lane.

<sup>c</sup>ADT = Average Daily Traffic.

<sup>d</sup>v/c = Volume to Capacity Ratio.

Intersection v/c ratios calculated for the four signalized intersections within Segment II were all below 1.0. The highest v/c ratio was reported at Grand Avenue, with a v/c ratio of 0.98. It should be noted that because this v/c ratio is approaching 1.0 it is approaching its theoretical capacity. Therefore, there is little reserve capacity at this intersection and there is the potential for increasing vehicle queues. Furthermore, as noted in Chapter II—Existing Conditions, recreational traffic is significant along this segment of U.S. 12. It is reasonable to expect lower levels of service during critical recreational peak periods.

## **Public Transportation**

The Metra/Milwaukee commuter rail line operates within this segment of U.S. 12 with a station in Fox Lake. There are no proposed rail improvements or extensions within this segment. Signs are needed to direct commuters to existing as well as future Metra stations along the corridor. A uniform sign system providing directional signs to these facilities should be established on all SRA routes. At the intersection of U.S. 12 and Illinois 132 (Grand Avenue), directional signing should be provided to the Metra/Milwaukee North Line—Fox Lake Station.

In addition to proper signing, stations also should have an adequate number of parking spaces for commuters who use automobiles to access the stations. Each station also should be equipped to accommodate bicycle parking. Currently at the Fox Lake Metra station, there are 393 parking spaces with more than 77 percent of parking being utilized.

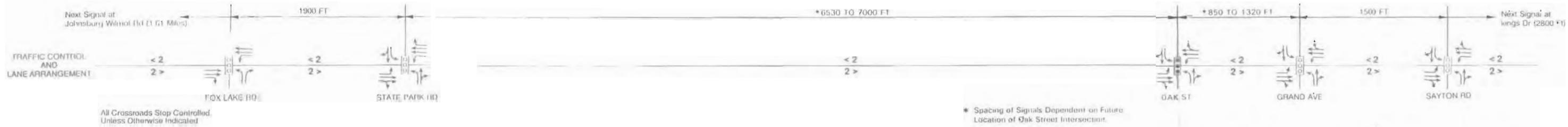
Proposed bus route additions are not currently proposed for this section of U.S. 12. However, future bus stops, shelters, and turnouts are recommended to serve Pace Bus Route 806. These bus stops should be implemented when development and/or service needs warrant. Appropriate standards for locating and marking bus stops should be followed.

## **Construction and Right-of-Way Costs**

The consultant's opinion of the total cost of the recommended plan for Segment II is \$2.95 million in 1991 dollars (see Table 22). This total includes construction costs and acquisition of right-of-way. The structures within Segment II do not require reconstruction or widening. The roadway resurfacing/reconstruction cost is estimated to be \$2.75 million, which includes only the future need for resurfacing the existing U.S. 12 four-lane cross section. Other construction costs include intersection improvements and/or signalization of intersections. The right-of-way acquisition cost is based on the estimated costs of the various types of land uses that would need to be acquired. Implementation of the SRA plan for this segment of U.S. 12 should not require additional right-of-way acquisition.

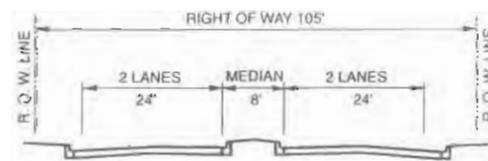
**Table 22**  
**Opinions of Construction and Right-of-Way Cost for**  
**SRA Improvements Along U.S. 12—Segment II**  
**(1991 Dollars)**

Roadway Reconstruction/Resurfacing	\$2,750,000
Intersections/Interchanges (Oak Street/Kings Drive)	200,000
Structures and Retaining Walls	-0-
Other	-0-
Subtotal	2,950,000
Right-of-Way	-0-
<b>TOTAL</b>	<b><u>\$2,950,000</u></b>

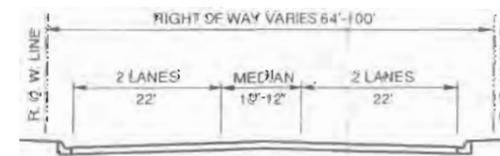


**LEGEND**

- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



ROADWAY SECTION A-A  
WEST OF FOX LAKE RD



ROADWAY SECTION B-B  
FOX LAKE RD TO SAYTON RD

**U.S. 12 PROPOSED PLAN**

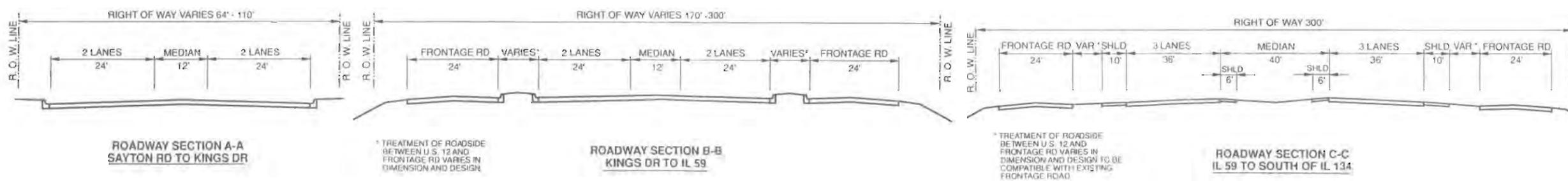
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION





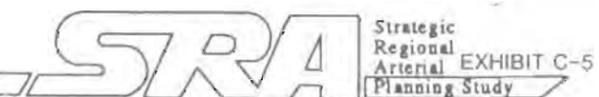
**LEGEND**

- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
 METRO Transportation Group and EJM Engineering  
 ILLINOIS DEPARTMENT OF TRANSPORTATION



### **Segment III—“Lakemoor to Wauconda” (Illinois 59 to Bonner Road)**

Segment III of the U.S. 12 SRA is approximately 6.3 miles long, extending south from Illinois 59 to Bonner Road. This segment includes the southern portion of Fox Lake, Lakemoor, the northern segment of Wauconda, and a substantial portion of unincorporated Lake County. The proposed corridor plan is described in the paragraphs below and depicted in Exhibits C-5 through C-8.

#### **Cross Section and Geometric Characteristics**

The recommended cross section reflects the rural characteristic of adjacent land use. As shown in Exhibits C-5 through C-8, the U.S. 12 cross section will include six basic through lanes (three lanes in each direction of travel), a divided roadway with an open 40-foot median, full 10-foot right shoulders, and open drainage. This cross section will extend south from Illinois 59 to Bonner Road. The cross section will transition from the four-lane section to the north at the Illinois 59 interchange. In the southbound direction, the existing left-hand merge design at the Illinois 59 interchange would be reconstructed to add the third southbound through lane. In the northbound direction, the transition from two lanes to three lanes also would be accommodated at the Illinois 59 interchange by a two-lane exit. This typical section can be accommodated within the existing right-of-way of between 200 and 300 feet.

From Illinois 59 to Brandenburg Road, the existing cross section contains segments of two-way frontage roads. The recommended cross section proposes adding segments of frontage roads between Illinois 134 and Brandenburg Road. This would provide continuous two-way frontage roads from Illinois 59 south to Brandenburg Road. One exception exists where the continuity of the frontage roads would be disrupted. Segments of frontage roads would not be constructed along the east side of U.S. 12 just south of the Big Hollow Schools. This is recommended to avoid increased traffic in front of the school. These frontage roads would parallel U.S. 12 on both sides of the corridor. The existing right-of-way (300 feet) along this segment would be sufficient to accommodate the proposed cross section.

The characteristics and design of the proposed cross section do not reflect all desirable suburban SRA cross-sectional criteria outlined in Table 15. The proposed cross section

was developed in an effort to maintain the existing open drainage characteristics along the corridor. Therefore, a closed drainage system consisting of curb and gutter was not employed. However, along some segments of U.S. 12, where existing frontage roads are already in place, the widening of U.S. 12 to three lanes (each direction of travel) may require spot locations where outside drainage may need to be closed. This would be required only to maintain the existing frontage roads, rather than relocating and reconstructing them. Design options in this area would be investigated further in future Phase I studies.

Beginning at Illinois 59, widening for the additional through lane would occur on both the east and west sides of U.S. 12. All widening would occur about the existing centerline on the outside, maintaining the existing open 40-foot median. This widening scheme would extend south to Bonner Road. Existing right-of-way is sufficient to accommodate the proposed widening scheme along most of this segment. One location along this segment would require right-of-way acquisition. Between “old” Illinois 120 and the relocated Illinois 120 (at Gilmer Road) the existing 100 feet of right-of-way is insufficient to accommodate the proposed cross section. Therefore, 50 feet of right-of-way would need to be acquired from the east and west sides of U.S. 12. This would require the acquisition of approximately 50 feet of right-of-way along the west side of U.S. 12.

There are other proposed “off-corridor” geometric improvements. Developing future north-south access roads are proposed between Molidor/Sullivan Lake Road and Fox Lake Road. These proposed roadways are recommended to accommodate access to future developing land uses and to avoid driveway access directly onto U.S. 12. It is recommended that these roadways not be constructed until development occurs. Furthermore, the intent of this plan is that construction and maintenance of these roadways would be the responsibility of local agencies. Other geometric improvements include the extension of Callahan Road west to intersect with U.S. 12 (see Exhibit C-8). In association with this improvement, Old Rand Road would be reconstructed and relocated to intersect with Callahan Road.

Between Illinois 59 and Bonner Road, there are eight segments of U.S. 12 that lie within or directly adjacent to floodplains (see Exhibits B-6 to B-8). The effects of the U.S. 12 improvement on these floodplains/floodways would primarily be due to the filling of the regulatory floodplain, the consideration of local ordinances in mitigating the effects, the potential increase in the backwater due to roadway geometrics, and opening up of structures where the backwater results in flood damages.

The filling of a regulatory floodplain generally can be accomplished within the project right-of-way or by slight increases near the drainage structure. This is based on the Division of Water Resources (DOWR) requirements where only the fill in any regulatory floodway needs compensatory storage. In Lake County, the application of the Stormwater Commission, Watershed Development Ordinance (WDO) could significantly increase the storage requirements.

There does not appear to be any overtopping of the existing roadway due to a regulatory floodplain. If it did overtop, then the U.S. 12 profile would need to be raised and the structure enlarged to compensate for the loss of flow over the road. All structures over the regulatory floodplain that are new or improved (other than maintenance-type improvements) could be required to have a larger waterway opening. Nearly all floodplain crossing structures have a backwater that could potentially damage an upstream building or structure. These areas would be investigated further in more detailed design studies. Cost estimates do not include the potential need for profile adjustments.

### **Traffic Control, Operations, and Safety**

The rural character of U.S. 12 within this segment defines the extent of safety and operational improvements within the recommended SRA plan. It is essential that the SRA corridor plan for this segment establish a long-range framework that reinforces the operational and safety objectives of the SRA system. The keys to establishing this framework are the location of future traffic signals and the maintenance of median access controls.

The traffic control diagrams along the top of each SRA plan exhibit indicate locations of existing and proposed signalized intersections, lane arrangements at these locations, and spacing to adjacent signals. The plan indicates the locations of median access breaks. Where a break is not shown, it is the intent of the plan that vehicles entering or exiting driveways or other existing and future access points be restricted to right-in/right-out movements only.

The traffic control plan for Segment III calls for retention of existing signals at Illinois 134, old Illinois 120, relocated Illinois 120, and Bonner Road. Proposed capacity improvements at existing signals include developing dual left-turn lanes along the U.S. 12 approaches at the relocated Illinois 120 intersection, as well as right-turn lanes at the

approaches to intersections with old Illinois 120 and Bonner Road. An intersection detail of the relocated Illinois 120 intersection is provided in Exhibit D-2.

The traffic control plan for this segment of U.S. 12 recommends potential future signals at seven locations. A future signal is proposed at the intersection with Brandenburg Road. Right- and left-turn lanes would be provided along U.S. 12 approaches. This intersection would serve as an access point to future development and the frontage roads proposed to the north. The signal at Brandenburg Road would be located approximately 3,800 feet south of the Illinois 134 signal.

The next potential signal is located at Molidor/Sullivan Lake Road, 5,000 feet south of the Brandenburg Road signal. This signal and the potential signal located at Fox Lake Road (2,850 feet to the south) would be the focal point for access to future development in this part of the corridor. As pointed out in the discussion on geometric characteristics, future access roads would be developed between these two future signals to facilitate access to future, anticipated development. Proposed lane arrangements include the provision for left- and right-turn lanes along U.S. 12 approaches to these two intersections.

The remaining four potential future signals are located south of the relocated Illinois 120 intersection. A future access point is shown 3,850 feet south of Illinois 120. The location of this access point and the recommendation for a signal is in response to future plans for a regional shopping mall located in the southwest quadrant of the U.S. 12 and Illinois 120 intersection. It is the intent of the plan to focus access to this area at the future signalized intersection and an additional access point along U.S. 12. The plan has been developed to be flexible with plans for future local circulation roads that may serve the site. Similar to other proposed intersections, this intersection would contain left- and right-turn lanes along U.S. 12. The three other potential signalized intersections would be located at a new future access road approximately 4,000 feet north of Case Road, at Case Road, and the new intersection formed by the extension of Callahan Road. Note that it is the intent of the plan to show the location of proposed new signals at desirable locations, consistent with potential future development. The spacing of these intersections has the flexibility to be moved or adjusted slightly while still maintaining the basic traffic control plan as developed. All proposed future signals meet SRA signal spacing criteria.

The traffic control and geometric plan for Segment III should result in significant improvements to the safety, capacity, and traffic operations of U.S. 12, as well as ensure adequate capacity and operation under future traffic conditions. The long-range ADT would be accommodated at the desired level of service C operation during peak periods.

To verify the reasonableness of the recommended improvements, a planning-level capacity analysis was performed. Table 23 shows the results of that analysis for all future signalized intersections along U.S. 12. The analysis utilizes CATS year 2010 SRA forecast traffic volumes as a general reference. As noted in the table, assumptions were made for crossroad volumes. Other capacity analysis assumptions are detailed in Appendix A.

The capacity analysis indicates that the recommended plan should produce acceptable v/c ratios for all Segment III signalized intersections. This will translate into reasonable levels of service during peak periods. Calculated v/c ratios ranged from 0.71 to 0.37, with the highest v/c ratio of 0.71 calculated at the intersection of U.S. 12 and Illinois 134.

## **Public Transportation**

As discussed in Chapter II, public transportation facilities do not operate in this segment. Furthermore, there are no plans for future public transportation facilities.

To facilitate access to existing Metra stations, the proposed plan identifies locations where directional signing to stations should be provided. Signing should be provided along the approach to the Illinois 59 interchange to the Metra/Milwaukee North Line Ingleside Station, and at the intersection of Illinois 134 to the Metra/Milwaukee North Line Long Lake Station.

In the event of the addition of future bus routes or rail lines, the plan identifies the locations of future park-n-ride or kiss-n-ride facilities. These facilities should be equipped to accommodate busses, carpools, and vanpools. A uniform sign system should be established. Along this segment of U.S. 12, a space should be reserved for a future park-n-ride/kiss-n-ride facility at the intersection of U.S. 12 and Illinois 120. This would serve traffic along the Illinois 120 SRA as well as U.S. 12.

**Table 23**  
**Evaluation of Signalized Intersection Operations Along**  
**Segment III (Illinois 59 to Bonner Road) of U.S. 12**

Intersection of U.S. 12 and:	Lane Arrangements <sup>b</sup>		Year 2010 ADT (vpd) <sup>c</sup>		v/c for Intersection <sup>d</sup>
	SRA	Crossroad	SRA	Crossroad	
Illinois 134 (Big Hollows Road <sup>a</sup> )	L-TTT-R	L-T-TR	33,700	12,000	0.71
Brandenburg Road <sup>a</sup>	L-TTT-R	L-TR	24,000	5,000	0.50
Sullivan Lake Road <sup>a</sup> Molidor Road	L-TTT-R	L-TR	20,200	5,000	0.45
Fox Lake Road <sup>a</sup>	L-TTT-R	L-TR	20,200	5,000	0.45
“Old” Illinois 120 <sup>a</sup>	L-TTT-R	L-TR	20,200	5,000	0.45
Illinois 120*	LL-TTT-R	L-TT-R	23,800	20,800	0.61
South of Illinois 120 <sup>a</sup>	L-TTT-R	L-TR	18,500	5,000	0.43
North of Case Road <sup>a</sup>	L-TTT-R	L-TR	14,200	5,000	0.37
Case Road <sup>a</sup>	L-TTT-R	L-TR	25,400	5,000	0.52
Old Rand Road/ Callahan Road <sup>a</sup>	L-TTT TTT-R	L-R	25,400	5,000	0.52

Note: \*Denotes SRA corridor.

<sup>a</sup>Assumed for unavailable volumes: 20,000 vpd for major arterials, 12,000 vpd for minor arterials, and 5,000 vpd for local roadways.

<sup>b</sup>L = Left-turn lane; T = through lane; R = right-turn lane; and TR = through and right-turn lane.

<sup>c</sup>ADT = Average Daily Traffic.

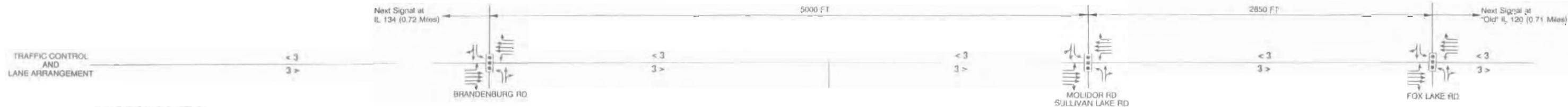
<sup>d</sup>v/c = Volume to Capacity Ratio.

The plan has also identified locations for reserve space for bus stops, shelters, and turnouts for potential future bus routes. These locations should be designed consistent with SRA suburban and Pace guidelines, in the event that future development may warrant additional service.

### Construction and Right-of-Way Costs

The consultant's opinion of the total cost of the recommended plan for Segment III is \$35.6 million in 1991 dollars (see Table 24). This total includes construction costs, intersection improvements, reconstruction/construction of structures, and acquisition of right-of-way. There were not any widened or reconstructed structures within this segment. The roadway reconstruction cost is estimated to be \$33.1 million, which includes improving U.S. 12 from a four-lane roadway to a six-lane roadway with an open 40-foot median and open drainage. Other construction costs include the future reconstruction of the U.S. 12 and Illinois 120, SRA to SRA intersection as well as constructing seven new potential future signalized intersections. The right-of-way acquisition cost is based on the estimated cost of the various types of land uses that would need to be acquired. It is estimated that 1.8 acres of right-of-way will need to be acquired at a cost of \$800,000.

<b>Table 24</b>	
<b>Opinions of Construction and Right-of-Way Cost for SRA Improvements Along U.S. 12—Segment III (1991 Dollars)</b>	
Roadway Reconstruction	\$33,100,000
Intersections/Interchanges (Illinois 120, Brandenburg Rd., Molidor Rd./Sullivan Lake Rd., Fox Lake Rd., Future Access Rd., Future Access Rd., Case Rd., Old Rand Rd.)	1,700,000
Structures and Retaining Walls	-0-
Other	-0-
Subtotal	34,800,000
Right-of-Way	800,000
<b>TOTAL</b>	<b><u>\$35,600,000</u></b>

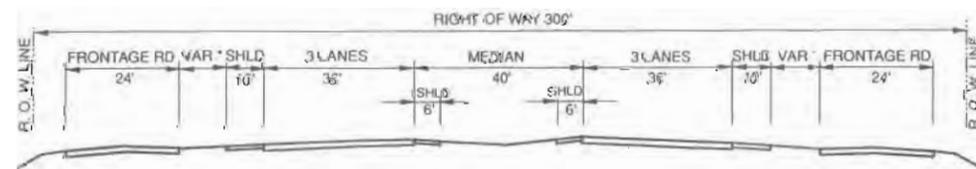


All Crossroads Stop Controlled Unless Otherwise Indicated



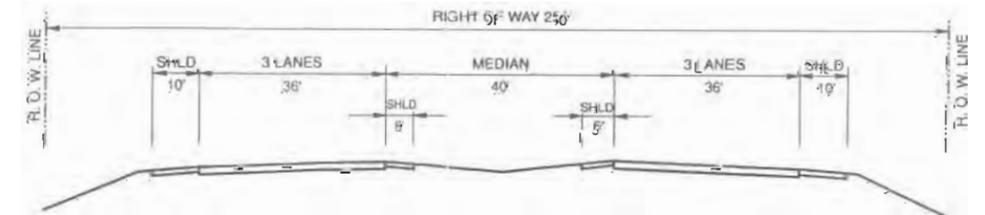
**LEGEND**

-  EXISTING SIGNAL
-  POTENTIAL SIGNAL
-  SIGNAL TO BE REMOVED
-  PROPOSED LANE ARRANGEMENT
-  NUMBER OF LANES
-  FUTURE RIGHT OF WAY LINE
-  BUS STOP



\*TREATMENT OF ROADSIDE BETWEEN U.S. 12 AND FRONTAGE RD VARIES IN DIMENSION AND DESIGN TO BE COMPATIBLE WITH EXISTING FRONTAGE ROAD

**ROADWAY SECTION A-A**  
NORTH OF BRANDENBURG RD TO BRANDENBURG RD

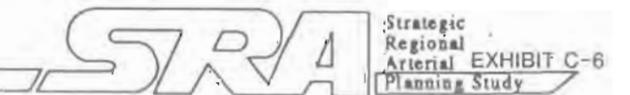


**ROADWAY SECTION B-B**  
BRANDENBURG RD TO FOX LAKE RD

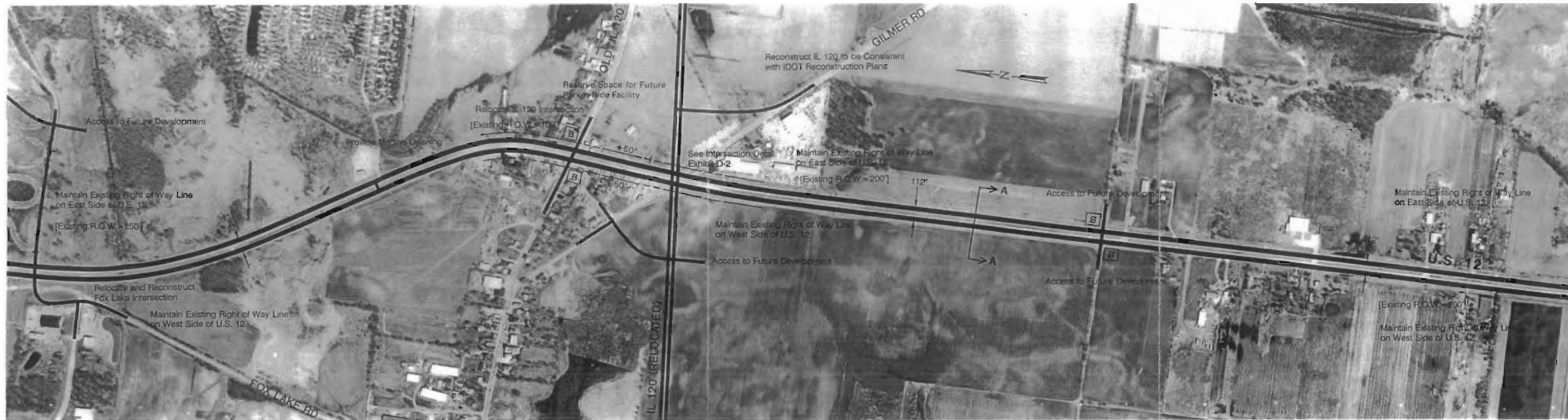
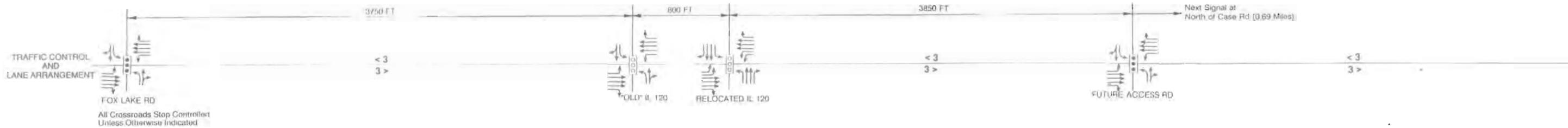
**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

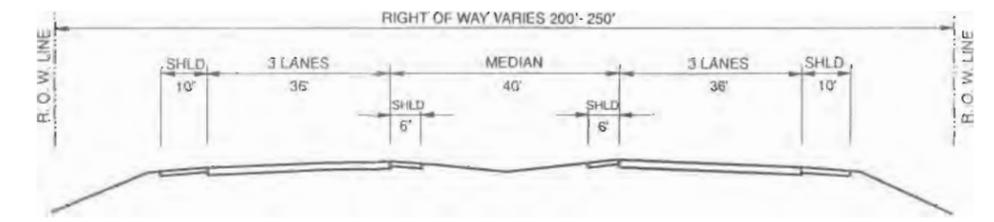
ILLINOIS DEPARTMENT OF TRANSPORTATION



Scale: 0 200 400 feet



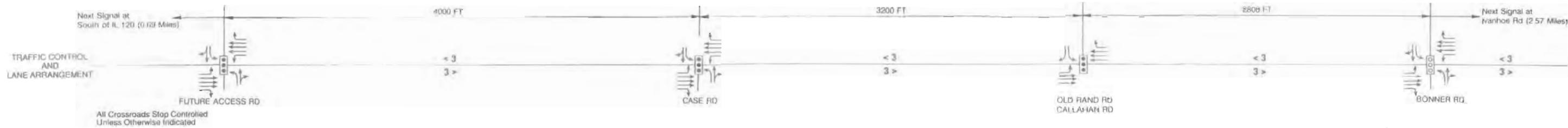
- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP (Recommended Bus Stops Include Bus Stops on Existing Routes and Future Routes)



## U.S. 12 PROPOSED PLAN

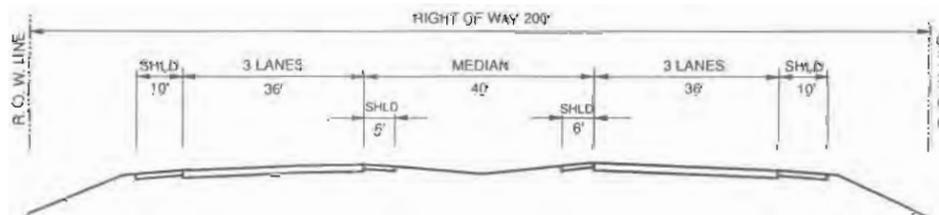
Prepared by CH2M HILL in association with  
 METRO Transportation Group and EJM Engineering  
 ILLINOIS DEPARTMENT OF TRANSPORTATION





**LEGEND**

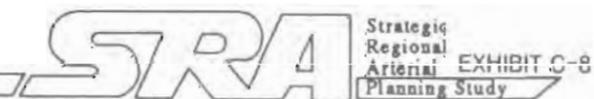
- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



**ROADWAY SECTION A-A**  
NORTH OF CASE RD TO SOUTH OF BONNER RD

**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
**ILLINOIS DEPARTMENT OF TRANSPORTATION**



**GENERAL NOTES**

CHANNELIZATION DETAILS TO REFLECT IDOT DESIGN STANDARDS AND CRITERIA AT TIME OF FINAL PLAN PREPARATION.

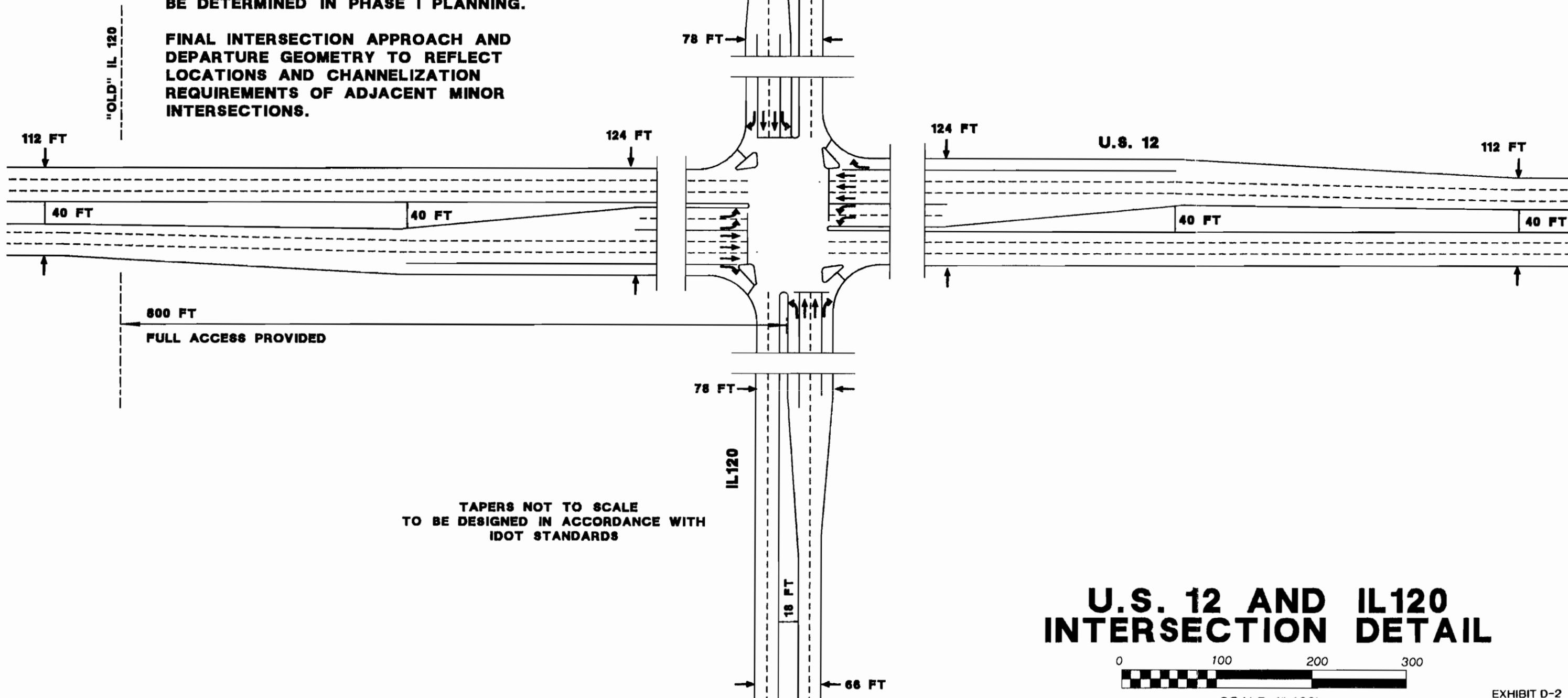
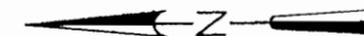
LENGTHS OF LEFT AND RIGHT TURN LANES TO BE DETERMINED DURING DETAILED TRAFFIC STUDIES IN PHASE I PLANNING.

ALL DIMENSIONS ARE EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

RIGHT OF WAY TO BE APPROXIMATELY 15' OUTSIDE FUTURE EDGES OF PAVEMENT. FINAL RIGHT-OF-WAY REQUIREMENTS TO BE DETERMINED IN PHASE I PLANNING.

FINAL INTERSECTION APPROACH AND DEPARTURE GEOMETRY TO REFLECT LOCATIONS AND CHANNELIZATION REQUIREMENTS OF ADJACENT MINOR INTERSECTIONS.

TAPERS NOT TO SCALE TO BE DESIGNED IN ACCORDANCE WITH IDOT STANDARDS



800 FT  
FULL ACCESS PROVIDED

TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS

**U.S. 12 AND IL120  
INTERSECTION DETAIL**

0 100 200 300



SCALE 1"=100'

## **Segment IV——“Wauconda to North Barrington” (Bonner Road to Miller Road)**

Segment IV of the U.S. 12 SRA is approximately 5.7 miles long, extending south from Bonner Road to Miller Road. The segment is located within Lake County and extends from Wauconda on the north to Lake Zurich on the south. Other communities that are served by this segment include North Barrington and Hawthorn Woods as well as portions of unincorporated Lake County. The proposed U.S. 12 SRA plan is discussed in the following paragraphs and is depicted in Exhibits C-9 through C-11.

### **Cross Section and Geometric Characteristics**

Similar to Segment III, the recommended cross section throughout Segment IV reflects the rural characteristic of adjacent land use. As shown in Exhibits C-9 through C-11, the U.S. 12 typical cross section will include six basic through lanes (three lanes in each direction of travel), an open 40-foot median, full 10-foot left and right shoulders, and open drainage. This cross section will extend south from Bonner Road to Miller Road and tie directly to the proposed cross section to the north of Bonner Road. The proposed typical section can be constructed within the existing 200 feet of right-of-way.

The typical section varies at certain locations along this segment. Northbound, from approximately 3,200 feet south of Bonner Road to Bonner Road, a fourth lane is added. This fourth lane is developed as a continuous right-turn lane to promote safe access into and out of existing and future land use along the east side of U.S. 12. This lane will provide for deceleration and acceleration of vehicles accessing and egressing land uses along the east side of U.S. 12. Developing the continuous right-turn lane will require an additional 5 feet of right-of-way on the east side of U.S. 12.

Southbound along U.S. 12, between Illinois 176 and Illinois 59, the spacing between the entrance ramp at Illinois 176 and the exit ramp from Illinois 59 is less than desirable. The arrangement of an entrance ramp followed by an exit ramp produces a weaving section, which can create operational and safety problems along U.S. 12. To ensure adequate operation of U.S. 12, an auxiliary lane is proposed southbound between Illinois 176 and Illinois 59. This fourth lane would require acquisition of approximately 5 feet of right-of-way on the west side of U.S. 12, or a total right-of-way of 205 feet. Because ramp spacing is greater in the northbound direction, a northbound auxiliary lane is not considered necessary.

Another exception to the six-lane typical section is located south of Lake Shore Drive. Southbound from Lake Shore Drive to about 3,400 feet south of Lake Shore Drive, a continuous right-turn lane is recommended. This additional lane would provide an acceleration and deceleration lane for vehicles entering and exiting the residential and commercial properties along the west side of U.S. 12. Access to existing and future development in this area would be restricted to right-in/right-out movements. This would require 5 feet of additional right-of-way, requiring a total right-of-way of 205 feet.

The characteristics and design of the proposed cross section do not reflect all desirable suburban SRA cross-sectional criteria outlined in Table 15. For example, the typical section recommends retaining the open drainage along this segment, rather than developing a closed drainage/curb and gutter section. The proposed cross section was developed in an effort to maintain the existing open drainage and rural characteristics along the corridor.

Widening of U.S. 12 to six lanes will require the widening of the existing U.S. 12 structure over Illinois 176. The additional lane may impact the clearance of Illinois 176 under U.S. 12. Future Phase I studies would determine whether the profile of Illinois 176 needs to be adjusted. In addition, the entrance and exit ramp terminals would be reconstructed to accommodate the six-lane section. Similar requirements are noted at the partial interchange at Illinois 59. The Illinois 59 structure over U.S. 12 would require total reconstruction in order to accommodate the proposed U.S. 12 cross section. The six-lane section would also require reconstruction of the Illinois 59 ramp terminals.

From Bonner Road to Miller Road, all widening would occur symmetrically about the existing centerline. In both the northbound and southbound directions of travel, the third through lane would be added to the outside of the existing edge of pavement.

Other proposed geometric improvements include off-corridor improvements, such as removing local access to the interchange ramps at Illinois 176. Access to these ramps should be restricted to Illinois 176 and U.S. 12 only. Cul-de-sacs would be used to restrict local access to ramps in the northeast and northwest quadrants of the Illinois 176 interchange. In the southwest quadrant, a local access road is recommended to provide access to/from Illinois 176 to the residential and commercial properties adjacent to the interchange ramp. Access and egress along U.S. 12 between the interchanges of Illinois 176 and Illinois 59 should be prohibited. This would require the purchase of access control along this segment of U.S. 12. Local access to the Illinois 59 interchange also should be restricted to Illinois 59 and U.S. 12 traffic only. This would require

eliminating access from the commercial property in the southeast quadrant to the existing loop ramp. As part of this improvement, a two-way frontage road is recommended along the east side of U.S 12 from south of Illinois 59 to Ivanhoe Road (see Exhibit C-10). This frontage road would provide alternate access to the commercial property identified above. In addition, the multiple access points intersecting northbound U.S.12 between Illinois 59 and Lake Shore Drive would be removed from U.S. 12 and accommodated along the new frontage road.

The recommended plan also proposes extending Timberlake Drive to the east across U.S. 12 to serve existing and future development. In association with this recommendation, a north-south connection is proposed south from Timberlake Drive to the existing residential development to the south. This would provide access to U.S. 12 by Timberlake Drive.

Two-way frontage roads are also recommended along both sides of U.S.12 north from Miller Road. The location of existing land use is set back far enough from U.S. 12 to develop frontage roads without significant impact to adjacent land use. Access to the existing development as well as future development would then be permitted along the frontage roads only. Access to U.S. 12 would be made through the intersection at Miller Road.

Areas of concern include at least two sections of U.S. 12 that lie within or adjacent to floodplains. These two locations are along the east side of U.S. 12 between Bonner Road and Slocum Lake Road (see Exhibit B-9). The effects of the U.S. 12 improvement on these floodplains/floodways would primarily be due to the filling of the regulatory floodplain, the consideration of local ordinances in mitigating the effects, the potential increase in the backwater due to roadway geometrics, and the opening up of structures where the backwater results in flood damages.

The filling of a regulatory floodplain generally can be accomplished within the project right-of-way or by slight increases near the drainage structure. This is based on the DOWR requirements where only the fill in any regulatory floodway needs compensatory storage. In Lake County, the application of the Stormwater Commission could significantly increase the storage requirements.

There does not appear to be any overtopping of the existing roadway due to a regulatory floodplain. If it did overtop, then the U.S. 12 profile would need to be raised and the structure enlarged to compensate for the loss of flow over the road. All structures over

the regulatory floodplain that are new or improved (other than maintenance-type improvements) could be required to have a larger waterway opening. Nearly all floodplain crossing structures have a backwater that could potentially damage an upstream building or structure. These areas would be investigated further in more detailed design studies. Note that estimates of construction cost do not include any potential adjustments to the U.S. 12 profile.

## **Traffic Control, Operations, and Safety**

Similar to Segment III, the rural character of U.S. 12 within this segment defines the extent of safety and operational improvements within the recommended SRA plan. It is essential that the SRA corridor plan for this segment establish a long-range framework that reinforces the operational and safety objectives of the SRA system. The keys to establishing this framework are the location of future traffic signals and the maintenance of median access control.

The traffic control diagrams along the top of each SRA plan exhibit indicate locations of existing and proposed signalized intersections, the lane arrangements at these locations, and spacing to adjacent signals. The plan indicates the locations of median access breaks. Where a break is not shown, it is the intent of the plan that vehicles entering or exiting driveways or other existing and future access points be restricted to right-in/right-out movements only.

The traffic control plan for Segment IV is depicted in Exhibits C-9 to C-11. The proposed plan calls for retention of existing signals at U.S. 12 intersections with Bonner Road, Lake Shore Drive, McHenry Road, and Miller Road. Proposed capacity improvements at existing signals other than the additional through lane in each direction of travel include adding a right-turn lane along the southbound approach to the Lake Shore Drive intersection, and adding right-turn lanes (northbound and southbound) at the intersection with Miller Road.

Two intersections are recommended as potential signalized intersections. They are located at Timberlake Drive and at the Wynstone residential golf community entrance. The proposed future signal at Timberlake Drive is recommended in association with the future north-south roadway connection tying Timberlake Drive to the existing residential area east of U.S. 12 (see Exhibit C-11). This signal would serve as the principal access point to existing development along Timberlake Drive and future development in the area

east and west of U.S. 12. The Timberlake Drive signal would be located roughly 1,350 feet south of the McHenry Road signal.

The potential future signal located at the Wynstone development is recommended to efficiently and safely serve the residential community to the east. In conjunction with the signal, the proposed plan recommends developing an auxiliary entrance/exit to the Mount St. Joseph's Community Children's Home. It is recommended that this new access point be located opposite of the Wynstone development. This would provide controlled access/egress to the St. Joseph's school at the new signal location. This future signalized intersection would be located approximately 4,750 feet south of the Timberlake Drive intersection and 3,180 feet north of Miller Road.

The traffic control and geometric plan for Segment IV would result in significant improvements to safety, capacity, and traffic operations of U.S. 12 as well as ensure adequate capacity and operation under future traffic conditions. The long-range ADT would be accommodated at the desired level of service C or better operation during peak periods.

To verify the reasonableness of the recommended improvements, a planning-level capacity analysis was performed. Table 25 shows the results of that analysis for all existing and future signalized intersections along U.S. 12. The analysis utilizes CATS year 2010 SRA forecast traffic volumes as a general reference. As noted in the table, assumptions were made for crossroad volumes. Other capacity analysis assumptions are detailed in Appendix A.

The capacity analysis indicates that the recommended plan should produce acceptable v/c ratios for all Segment IV signalized intersections. This will translate into reasonable levels of service during peak periods. Calculated v/c ratios ranged from 0.57 to 0.83, with the highest v/c ratio of 0.83 calculated at the intersection of U.S. 12 and McHenry Road.

The traffic control plan and geometric plan for Segment IV should result in improved safety as well as traffic operations. While segments or intersections were not identified as high accident locations, the improvements described (including the proposed six-lane cross section), the locations of signalized intersections, and the access control/management recommendations should help maintain safety along this segment of U.S. 12.

**Table 25**  
**Evaluation of Signalized Intersection Operations Along**  
**Segment IV (Bonner Road to Miller Road) of U.S. 12**

Intersection of U.S. 12 and:	Lane Arrangements <sup>b</sup>		Year 2010 ADT (vpd) <sup>c</sup>		v/c for Intersection <sup>d</sup>
	SRA	Crossroad	SRA	Crossroad	
Bonner Road <sup>a</sup>	L-TTT-R	L-TR	23,400	12,000	0.75
Lake Shore Drive <sup>a</sup>	L-TTT-R	L-TR	27,600	5,000	0.55
McHenry Road <sup>a</sup>	L-TTT TTT-R	L-R	29,200	5,000	0.83
Timberlake Road <sup>a</sup>	L-TTT	L-R	29,200	5,000	0.57
	TTT-R	L-R	29,200	5,000	0.57
Wynstone <sup>a</sup>	L-TTT-R	L-TR	29,200	5,000	0.57
	L-TTT-R				

Note: \*Denotes SRA corridor.

<sup>a</sup>Assumed for unavailable volumes: 20,000 vpd for major arterials, 12,000 vpd for minor arterials, and 5,000 vpd for local roadways.

<sup>b</sup>L = Left-turn lane; T = through lane; R = right-turn lane; and TR = through and right-turn lane.

<sup>c</sup>ADT = Average Daily Traffic.

<sup>d</sup>v/c = Volume to Capacity Ratio.

## Public Transportation

As discussed in Chapter II, public transportation facilities do not operate in this segment. Furthermore, there are no plans for future public transportation facilities.

To facilitate access to existing Metra stations, the proposed plan identifies locations where directional signing to stations should be provided. Signing should be provided along the southbound approach at the Illinois 59 interchange (see Exhibit C-9 and C-10) to the C&NW-Metra/Northwest Line at the Barrington Station.

In the event of the addition of future bus routes or rail lines, the plan identifies the locations of future park-n-ride or kiss-n-ride facilities. These facilities should be equipped to accommodate busses, carpools, and vanpools. A uniform sign system also should be established.

Along this segment of U.S. 12 a space should be reserved for a future park-n-ride/kiss-n-ride facility along Illinois 59 near the interchange with U.S. 12. This would serve traffic along the Illinois 59 SRA as well as U.S. 12, and support employees commuting to new Sears offices.

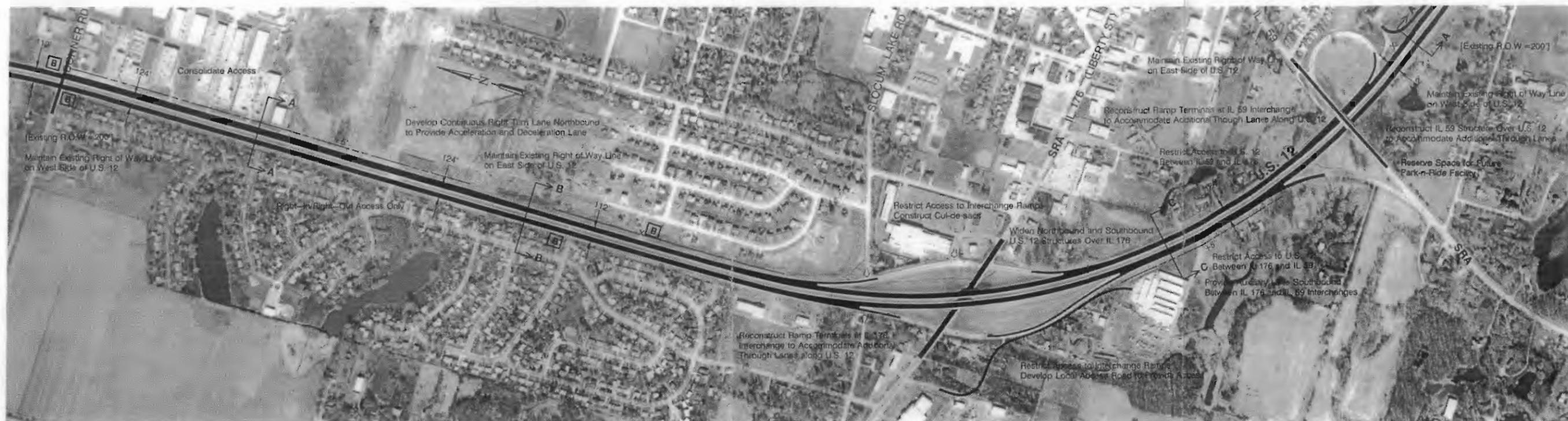
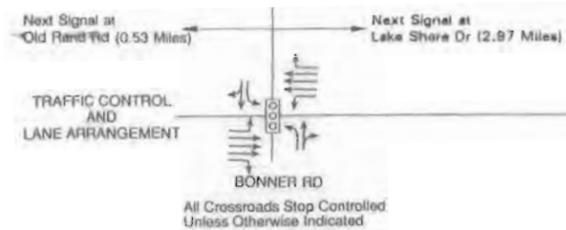
The plan also has identified locations for reserve space for bus stops, shelters, and turnouts for potential future bus routes. These locations should be designed consistent with suburban SRA and Pace guidelines, in the event that future development may warrant future service.

### **Construction and Right-of-Way Costs**

The consultant's opinion of the total cost of the recommended plan for Segment IV is \$29.79 million in 1991 dollars (see Table 26). This total includes construction costs, acquisition of right-of-way, and construction/reconstruction of structures. In Segment IV, the estimate includes the widening costs associated with the U.S 12 structures over Illinois 176 and the reconstruction cost of Illinois 59 over U.S. 12. The roadway reconstruction cost is estimated to be \$26.79 million, which includes expanding U.S. 12 from a four-lane roadway to a six-lane roadway with an open grass median and open drainage. Reconstruction or widening of the three bridges in this section is estimated at \$2.19 million. Other construction costs include intersections with signalization and reconstruction of interchange ramp tapers. The right-of-way acquisition cost is based on the estimated cost of the various types of land uses that would need to be acquired. It is estimated that 1.0 acre of right-of-way will need to be acquired at a cost of \$110,000.

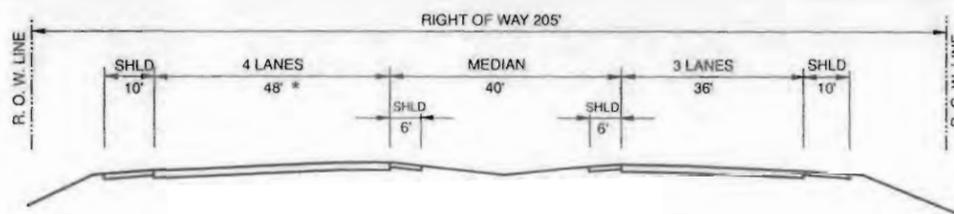
**Table 26**  
**Opinions of Construction and Right-of-Way Cost for**  
**SRA Improvements Along U.S. 12—Segment IV**  
**(1991 Dollars)**

Roadway Reconstruction	\$26,790,000
Intersections/Interchanges (Timberlake Dr., Wynstone, and Reconstruction of Interchange Tapers)	700,000
Structures and Retaining Walls (Illinois 59, Illinois 176)	2,190,000
Other	-0-
Subtotal	29,680,000
Right-of-Way	110,000
<b>TOTAL</b>	<b><u>\$29,790,000</u></b>



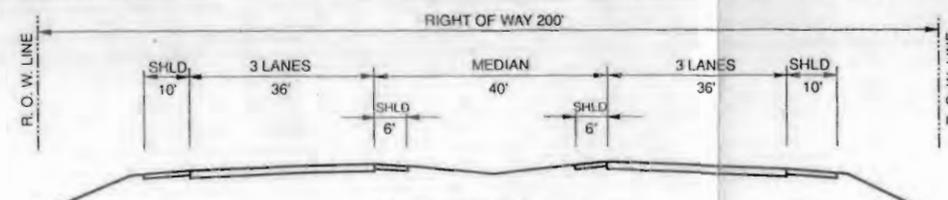
**LEGEND**

- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops Include Bus Stops on Existing Routes and Future Routes)

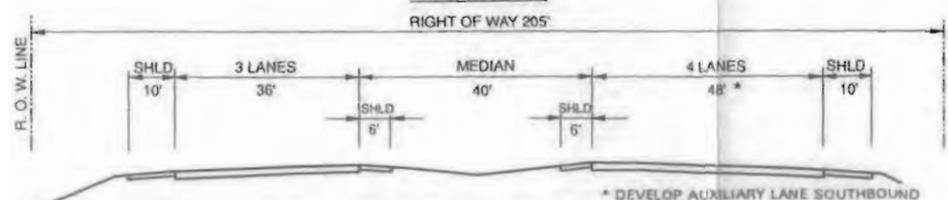


**ROADWAY SECTION A-A  
BONNER RD TO NORTH OF IL 176**

\* DEVELOP CONTINUOUS RIGHT TURN LANE NORTHBOUND TO ACCOMMODATE ACCELERATION AND DECELERATION OF RIGHT TURNING VEHICLES



**ROADWAY SECTION B-B  
NORTH OF IL 176 TO IL 176  
SOUTH OF IL 59**



**ROADWAY SECTION C-C  
IL 176 TO IL 59**

\* DEVELOP AUXILIARY LANE SOUTHBOUND TO FACILITATE WEAVING TRAFFIC

**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION

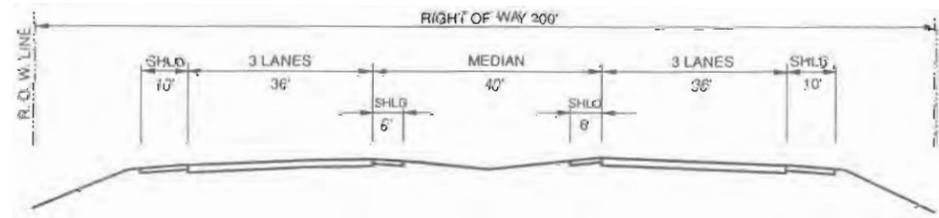
**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT C-9







- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP (Recommended Bus Stops Include Bus Stops on Existing Routes and Future Routes)



ROADWAY SECTION A-A  
McHENRY RD TO SOUTH OF MILLER RD

## U.S. 12 PROPOSED PLAN

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT C-11



## **Segment V——“Lake Zurich to Kildeer”**

### **(Miller Road to Lake-Cook Road)**

Segment V of the U.S. 12 SRA is approximately 6.1 miles long, extending from Miller Road to Lake-Cook Road. Segment V includes the communities of Lake Zurich, Kildeer, Deer Park, and Long Grove. Segment V is contained within Lake County. The proposed SRA plan is discussed in the following paragraphs and is depicted in Exhibits C-12 and C-14.

### **Cross Section and Geometric Characteristics**

The proposed cross section design varies along this segment of U.S. 12. The plan was developed to be consistent with existing land use and compatible with the design of the existing cross section. In general, the plan calls for a six-lane cross section (three lanes in each direction of travel), a continuous median that varies in width and type, and segments of open and closed drainage.

The proposed cross section from south of Miller Road to a point north of Old Rand Road/Ravinia Terrace would maintain the 40-foot open median and open drainage design. The third through lane would be added to the outside of the existing edge of pavement. This cross section would be compatible and consistent with the cross section proposed north of Miller Road. The existing right-of-way of 200 feet would be sufficient to accommodate the proposed cross section.

From north of North Old Rand Road through Lake Zurich to a point south of Quentin Road, the proposed cross section would consist of three lanes in each direction of travel separated by a 30-foot raised median. The cross section would transition from rural in nature to an urban-type design north of North Old Rand Road. The intent of the proposed plan is to maintain the existing raised median, recently constructed (summer 1991) north of North Old Rand Road. South of North Old Rand Road to south of Ela Road, the existing median (less than 30 feet) would be widened to accommodate the 30-foot median. Widening for the median, as well as for the additional through lane in each direction of travel, would occur symmetrically about the existing centerline, requiring the widening of the roadway equally to the east and west. Other characteristics of the proposed cross section include providing a closed drainage system, consisting of curb and gutter, along the outside and inside edges of pavement. The intent of the plan is to begin the closed drainage system at the location where it presently occurs. The existing right-of-

way dimension of 150 feet would be sufficient to accommodate the proposed typical cross section.

South of Ela Road to south of Quentin Road, the six-lane cross section with a raised 30-foot median would continue. This would require converting the existing 30-foot open median to a 30-foot raised median, resulting in closed drainage in the median. The third though lane in each direction would be added to the outside of the existing edge of pavement. As a result, the existing ditches and open drainage along the outside of the roadway would be closed. Curb and gutter and a closed drainage system would be implemented. The existing EJ&E Railway structure over U.S. 12 would not have sufficient horizontal clearance to accommodate the proposed cross section. Furthermore, the existing vertical clearance of 14 feet 3 inches does not meet SRA standards. Therefore, the plan calls for reconstruction of the EJ&E structure over U.S. 12. The existing 150 feet of right-of-way from south of Ela Road to north of Quentin Road is capable of accommodating the recommended six-lane typical section. However, north of Quentin Road the existing right-of-way reduces 130 and 100 feet, requiring an additional 15 feet of right-of-way along each side of U.S. 12.

South of the Quentin Road intersection, the median dimension would be reduced. From this point to Lake-Cook Road, the proposed typical section includes the six basic lanes (three in each direction of travel) and a raised 18-foot median. The closed drainage/curb and gutter design would be maintained though this segment. Because the existing drainage through this area is closed, impact to existing drainage would be minimal. The existing flush 12- to 14-foot median would be reconstructed and widened to provide the raised 18-foot median. All widening would occur symmetrically about the existing centerline. This cross section would require 120 feet of right-of-way to implement. Acquisition of 10 feet of right-of-way along both sides of the corridor would be necessary.

Other proposed geometric improvements include off-corridor improvements. One such improvement is between Old Rand Road and Cuba Road (see Exhibit C-13). The existing skewed intersection at Old Rand Road would be reconstructed to intersect with U.S. 12 at 90 degrees. To accomplish this, the intersection would be relocated 500 feet north of its present location. To maintain access to existing development off of Old Rand Road as well as provide access to future development, the abandoned portion of Old Rand Road would be retained. This roadway would intersect with the relocated Old Rand Road and would extend to the south to serve future development. As part of the plan, an access point is proposed south of Old Rand Road. This access point is intended to

facilitate access to future development east of the corridor. Access at this location would be restricted to right-in/right-out movements only (see Exhibit C-13).

Other off-corridor improvements are focused in the area between Long Grove Road and Lake-Cook Road (see Exhibit C-14), including extending Plum Grove Road south of U.S. 12 to intersect with Lake-Cook Road. Between Long Grove Road and Plum Grove Road, along the west side of U.S. 12, a future access road is proposed. This road is intended to serve as the access road to existing and future development that occurs adjacent to the corridor. Similarly, access roads are proposed north from Lake-Cook Road and north of Plum Grove Road along the east side of U.S. 12. These future access roads are proposed, recognizing that the recommended typical section would restrict left-turn access to and from development along this section of U.S. 12. Full access to existing and future development would therefore be concentrated along these access roads by the signals at Long Grove Road and Plum Grove Road.

This segment of U.S. 12 effects at least one floodplain (see Exhibit B-12) south of Miller Road. The effect of the U.S. 12 widening on the floodplain would primarily be due to the filling of the regulatory floodplain, the consideration of local ordinances in mitigating the effects, the potential increase in the backwater due to roadway geometrics, and the opening up of structures where the backwater results in flood damage. The filling of a regulatory floodplain generally can be accomplished within the project right-of-way or by slight increases near the drainage structure. This is based on the DOWR requirements where only the fill in any regulatory floodway needs compensatory storage. In Lake County, the application of the Stormwater Commission could significantly increase the storage requirements.

South of Ela Road to Quentin Road, the existing open drainage system would be closed. This would include curb and gutter along the outside of the roadway as well as in the median. The median geometry should be evaluated to optimize the retention/detention potential of stormwater runoff from the widened pavement. A grassed median would reduce the need to acquire substantial right-of-way to meet Stormwater Management Commission (SMC) criteria. South of Quentin Road to Lake-Cook Road, similar considerations with respect to median treatment should be considered. It also should be noted that due to urbanization, an overload on existing outlets appears possible. Additional storage/right-of-way would be required to mitigate effects of potential flooding to both the highway and adjacent property owners.

## **Traffic Control, Operations, and Safety**

Although much of the land use in Segment V is well established, there are some areas between Illinois 22 and Lake-Cook Road that are still evolving. It is essential that the SRA corridor plan for this segment establish a long-range framework that reinforces the operational and safety objectives of the SRA system. The keys to establishing this framework are the locations of future traffic signals and the maintenance of median access control.

The diagrams along the top of each SRA plan exhibit indicate locations of existing and proposed signalized intersections, the lane arrangements at these locations, and spacing to adjacent signals. The plan indicates the locations of median access breaks, however most median breaks are limited to at-grade intersections. Where a break is not shown, it is the intent of the plan that vehicles entering or exiting driveways or other existing and future access points be restricted to right-in/right-out movements only. Intersection details for key intersections within this segment are diagramed in Exhibits D-3 through D-5.

North of Illinois 22, the traffic control plan for Segment V calls for retention of existing signals at North Old Rand Road/Ravinia Terrace, the mall entrance, and Illinois 22. In an effort to consolidate access along U.S. 12 between Ravinia Terrace and Signal Hill Road, access restrictions to the local residential streets are proposed. Cul-de-sacs would be introduced at Glencoe Terrace, Winnetka Terrace, Kenilworth Terrace, and Evanston Terrace, eliminating access to U.S. 12. Access to Country Club Road and Wilmette Terrace would be limited to right-in/right-out movements only. Traffic traveling northbound on U.S. 12 destined to the residential areas to the west would be permitted full access at either Signal Hill Road or Ravinia Terrace. A potential signal at Signal Hill Road would be required to accommodate the proposed full access. This signal would be located about 1,200 feet north of the signal to North Lake Commons Mall. This would adequately satisfy suburban SRA signal spacing criteria of  $\frac{1}{4}$  mile.

South of Ela Road, planning for a potential new signal at the intersection with the Ryan Theater Property (see Exhibit C-13) is proposed. This new signal would not only serve demand at the existing theater property, but would provide access to future development in the open area east of U.S. 12. Spacing to the existing signalized intersection meets desirable SRA criteria.

Improvements are recommended at a number of the existing signalized intersections. These improvements are proposed to help improve the capacity of the intersection as well as improve the operation of the arterial. Right-turn lanes are recommended along the northbound and southbound approaches of U.S. 12 intersections with North Old Rand Road/Ravinia Terrace, Cuba Road, Long Grove Road, and Plum Grove Road.

The most significant capacity improvements are recommended at the SRA to SRA intersections that serve this segment of U.S. 12. To promote efficient and smooth movement of traffic between SRAs, the following improvements are recommended at SRA to SRA intersections. At the intersection of U.S. 12 and Illinois 22, dual left-turn lanes and a single right-turn lane are recommended at all four approaches. Other intersection alternatives at this location were studied. These alternatives focused on developing a grade-separation between U.S. 12 and Illinois 22. Due to the significant disruption, in terms of access as well right-of-way acquisition that an interchange alternative would create, the at-grade alternative depicted in Exhibit D-3 is recommended. Exhibits describing the other alternatives are provided in Appendix B for further reference. An interchange concept between Illinois 22 and U.S. 12 would be retained as a possible “post-2010” plan element

At the SRA to SRA intersection of Quentin Road and U.S. 12, dual left-turn lanes and a single right-turn lane are recommended on all approaches. Exhibit D-4 provides additional detail of this intersection. Intersection improvements at the Lake-Cook Road and U.S. 12 intersection (SRA to SRA intersection), include the provision for dual left-turn and right-turn lanes along the U.S. 12 approaches to Lake-Cook Road.

With respect to pedestrian access, the proposed plan recommends a pedestrian crossing of U.S. 12 within Lake Zurich. Coordination with Village of Lake Zurich staff and future IDOT Phase I studies will investigate alternative locations for a pedestrian crossing

Additional right-of-way requirements, above and beyond those required for implementing the proposed typical section, will be required to implement the intersection improvements described above. Additional right-of-way requirements would be focused at the intersection approaches and would include width required for additional turning lanes and associated tapers. Exhibits C-12 through C-14 show additional right-of-way requirements at these intersections.

To verify the reasonableness of the recommended improvements, a planning-level intersection capacity analysis was performed. Table 27 shows the results of that analysis

**Table 27**  
**Evaluation of Signalized Intersection Operations Along**  
**Segment V (Miller Road to Lake-Cook Road) of U.S. 12**

Intersection of U.S. 12 and:	Lane Arrangements <sup>b</sup>		Year 2010 ADT (vpd) <sup>c</sup>		v/c for Intersection <sup>d</sup>
	SRA	Crossroad	SRA	Crossroad	
Miller Road <sup>a</sup>	L-TTT-R	L-TR	25,700	12,000	0.78
N. Old Rand Road <sup>a</sup>	L-TTT-R	L-TR	25,700	5,000	0.53
Signal Hill Road <sup>a</sup>	L-TTT TTT-R	L-R	25,700	5,000	0.53
North of Illinois 22 <sup>a</sup>	L-TTT-R	L-TR	25,300	5,000	0.52
Illinois 22 <sup>a</sup>	LL-TTT-R	LL-TTT-R	39,800	38,300	0.83
Ela Road <sup>a</sup>	L-TTT-R	L-T-TR	39,800	20,000	0.93
Theater Entrance <sup>a</sup>	L-TTT-R	L-TR	36,600	5,000	0.67
Deerpath Road <sup>a</sup>	L-TTT-R	L-TR	36,600	5,000	0.67
Old Rand Road <sup>a</sup>	L-TTT TTT-R	LL-R	44,900	12,000	0.87
Cuba Road <sup>a</sup>	L-TTT-R	L-T-TR	56,500	12,000	0.99
Quentin Road <sup>a</sup>	LL-TTT-R	LL-TT-R	56,500	20,000	0.84
Long Grove Road <sup>a</sup>	L-TTT-R	L-TT-R	51,100	12,000	0.91
Plum Grove Road <sup>a</sup>	L-TTT-R	L-TR	48,300	5,000	0.83
Lake-Cook Road <sup>a</sup>	LL-TTT-R	L-T-T-R	48,300	20,000	0.86

**Note:**    <sup>a</sup>Denotes SRA corridor.  
<sup>a</sup>Assumed for unavailable volumes: 20,000 vpd for major arterials, 12,000 vpd for minor arterials, and 5,000 vpd for local roadways.  
<sup>b</sup>L = Left-turn lane; T = through lane; R = right-turn lane; and TR = through and right-turn lane.  
<sup>c</sup>ADT = Average Daily Traffic.  
<sup>d</sup>v/c = Volume to Capacity Ratio.

for all future signalized intersections along U.S. 12. The analysis utilizes CATS year 2010 SRA forecast traffic volumes as a general reference. As noted in the table, assumptions were made for minor crossroad volumes. Other capacity analysis assumptions are detailed in Appendix A.

The capacity analysis indicates that the recommended plan should produce acceptable v/c ratios for the entire segment, which would result in reasonable levels of service during peak periods. Calculated v/c ratios at signalized intersections ranged from 0.52 to 0.99.

The highest v/c ratio of 0.99 was calculated at Cuba Road. While this intersection is approaching its theoretical capacity of 1.0, this intersection would be expected to operate at a reasonable level of service. Acceptable levels of service were computed at the SRA to SRA intersections within this segment. These v/c ratios ranged from 0.83 to 0.86.

The traffic control plan and geometric plan for Segment V should result in improved safety as well as traffic operations. The proposed improvements described (including the proposed six-lane cross section), locations of signalized intersections, and the access control/management recommendations should help maintain safety along this segment.

## **Public Transportation**

The EJ&E Railway operates immediately east of the Lake Zurich CBD and crosses U.S. 12 south of Ela Road. Although there are no recommended improvements to this facility in the near future, Metra is currently evaluating the potential for commuter service on this rail line. Two possible locations have been proposed for future stations in the vicinity of the U.S. 12 corridor. These locations are located at the intersection of Ela Road and U.S. 12 in Lake Zurich and just north of Illinois 22 in Lake Zurich.

To facilitate access to existing Metra stations, the proposed plan identifies locations where directional signing to stations should be provided. Signing should be provided along the northbound and southbound approach to Illinois 22 to the Metra/Milwaukee North Line-Barrington Station. Directional signing is also recommended southbound at the approach to Quentin Road to serve the C&NW-Metra/Northwest Line at the Palatine Station. Future directional signing should also be provided if the EJ&E Railway becomes a commuter line. This signing should be provided at the U.S. 12 intersections with Illinois 22 and Ela Road.

The plan identifies the locations of future park-n-ride or kiss-n-ride facilities. These facilities should be equipped to accommodate busses, carpools, and vanpools. A uniform sign system also should be established. Along this segment of U.S. 12, three locations have been identified where space should be reserved for future park-n-ride/kiss-n-ride facilities. These locations include: the Illinois 22 and U.S. 12 intersection, the U.S. 12 and Quentin Road intersection, and the U.S. 12 and Lake-Cook Road intersection.

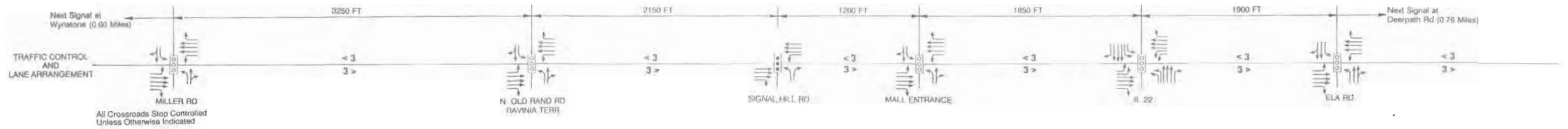
Currently new bus route additions for this section of U.S. 12 are not proposed. However, future bus stops, shelters, and turnouts are recommended to serve Pace Bus Route 725 and 728. Locations for future bus stops, shelters, etc. also have been proposed where future bus routes may be added. These bus stops should be implemented when development and/or service needs warrant. Appropriate standards for locating and marking bus stops should be followed.

### **Construction and Right-of-Way Costs**

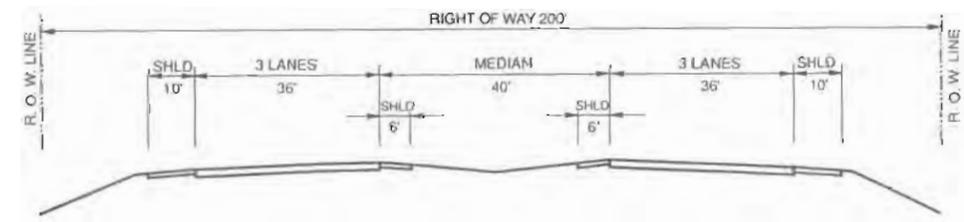
The consultant's opinion of the total cost of the recommended plan for Segment V is \$37.7 million in 1991 dollars (see Table 28). This total includes construction costs, acquisition of right-of-way, and reconstruction of structures. The structure carrying the EJ&E Railway over U.S. 12 south of Ela Road would require reconstruction to accommodate the proposed typical section for U.S. 12. The roadway reconstruction cost is estimated to be \$30.9 million, which includes improving U.S. 12 from a four-lane roadway to a six-lane roadway with an open or raised median and open or closed drainage. Other construction costs include a number of intersection improvements including the reconstruction and expansion of three SRA to SRA intersections. The right-of-way acquisition cost is based on the estimated cost of the various types of land uses that would need to be acquired. It is estimated that 6.7 acres of right-of-way will need to be acquired at a cost of \$2.6 million.

**Table 28**  
**Opinions of Construction and Right-of-Way Cost for**  
**SRA Improvements Along U.S. 12—Segment V**  
**(1991 Dollars)**

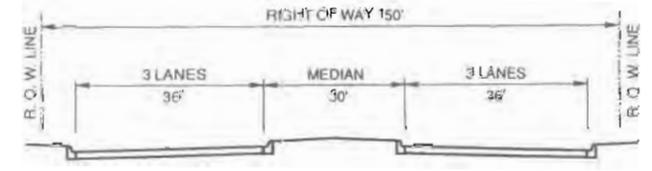
Roadway Reconstruction	\$30,920,000
Intersections/Interchanges (Signal Hill Rd., IL 22 [SRA], Theater Access, Old Rand Rd., Quentin Rd. [SRA], Lake-Cook Rd. [SRA])	3,200,000
Structures and Retaining Walls (EJ&E Railway)	1,000,000
Other	-0-
Subtotal	35,120,000
Right-of-Way	2,570,000
<b>TOTAL</b>	<b><u>\$37,690,000</u></b>



- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP (Recommended Bus Stops Include Bus Stops on Existing Routes and Future Routes)



ROADWAY SECTION A-A  
MILLER RD TO SOUTH OF N. OLD RAND RD

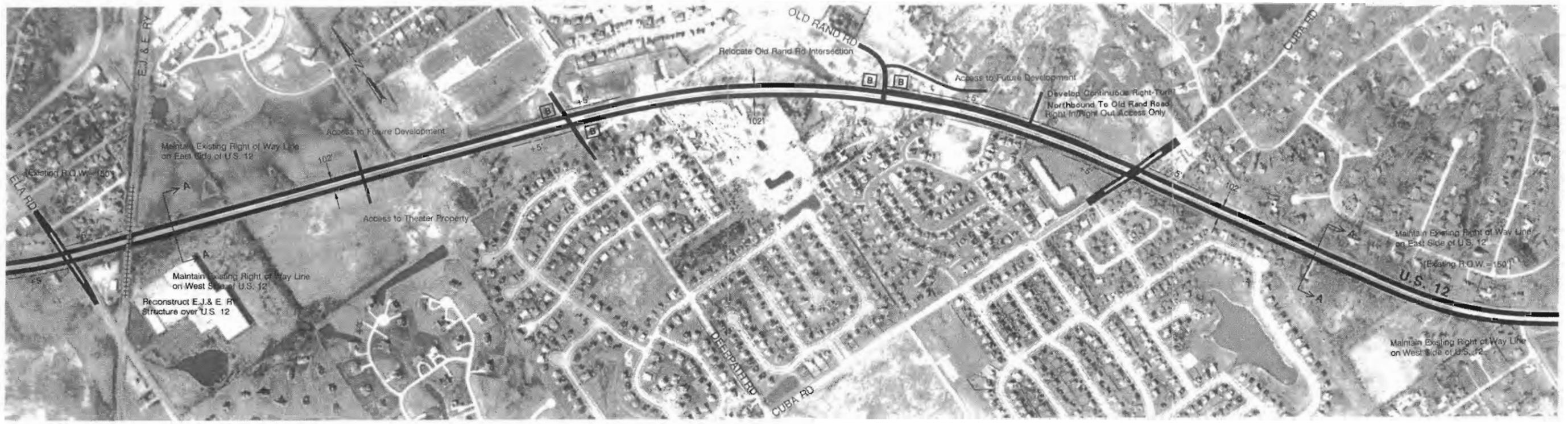


ROADWAY SECTION B-B  
SOUTH OF N. OLD RAND RD TO SOUTH OF ELA RD

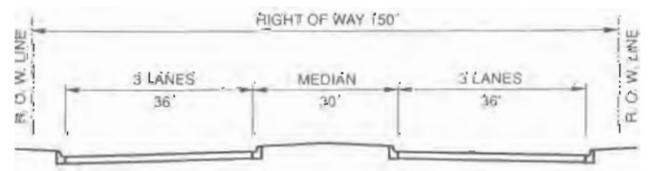
**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION





- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



ROADWAY SECTION A-A  
ELA RD TO SOUTH OF CUBA RD

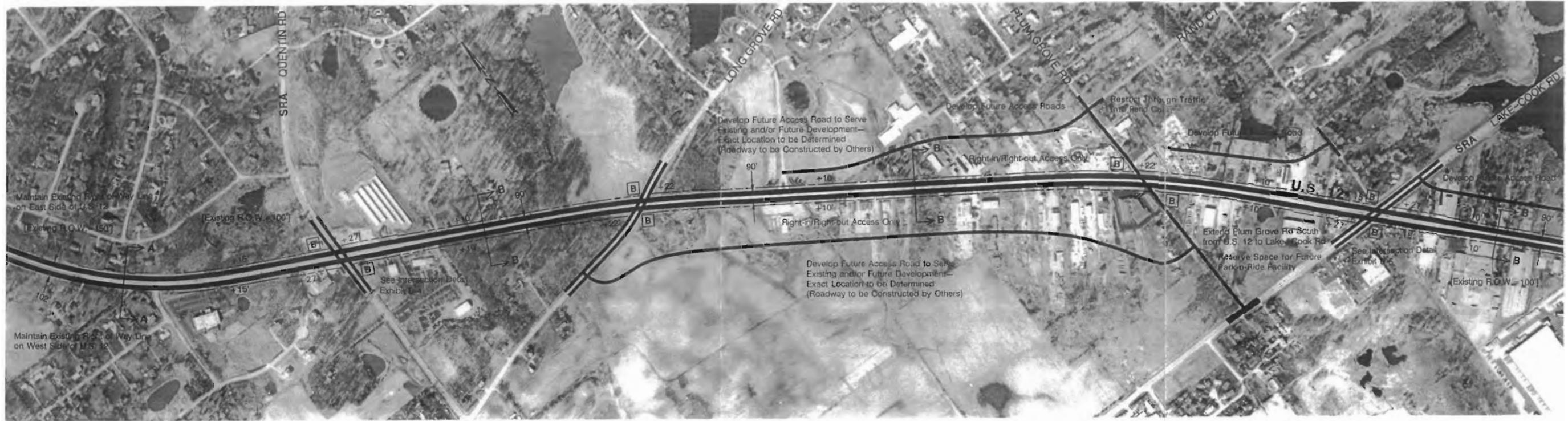
# U.S. 12 PROPOSED PLAN

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION



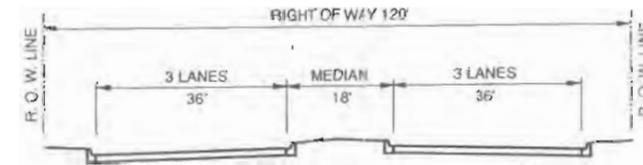
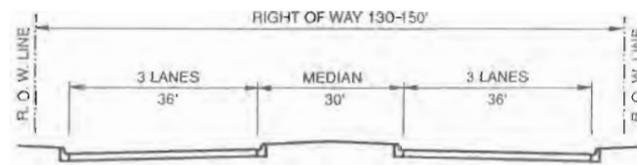


All Crossroads Stop Controlled Unless Otherwise Indicated



**LEGEND**

- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops Integrate Bus Stops on Existing Routes and Future Routes)

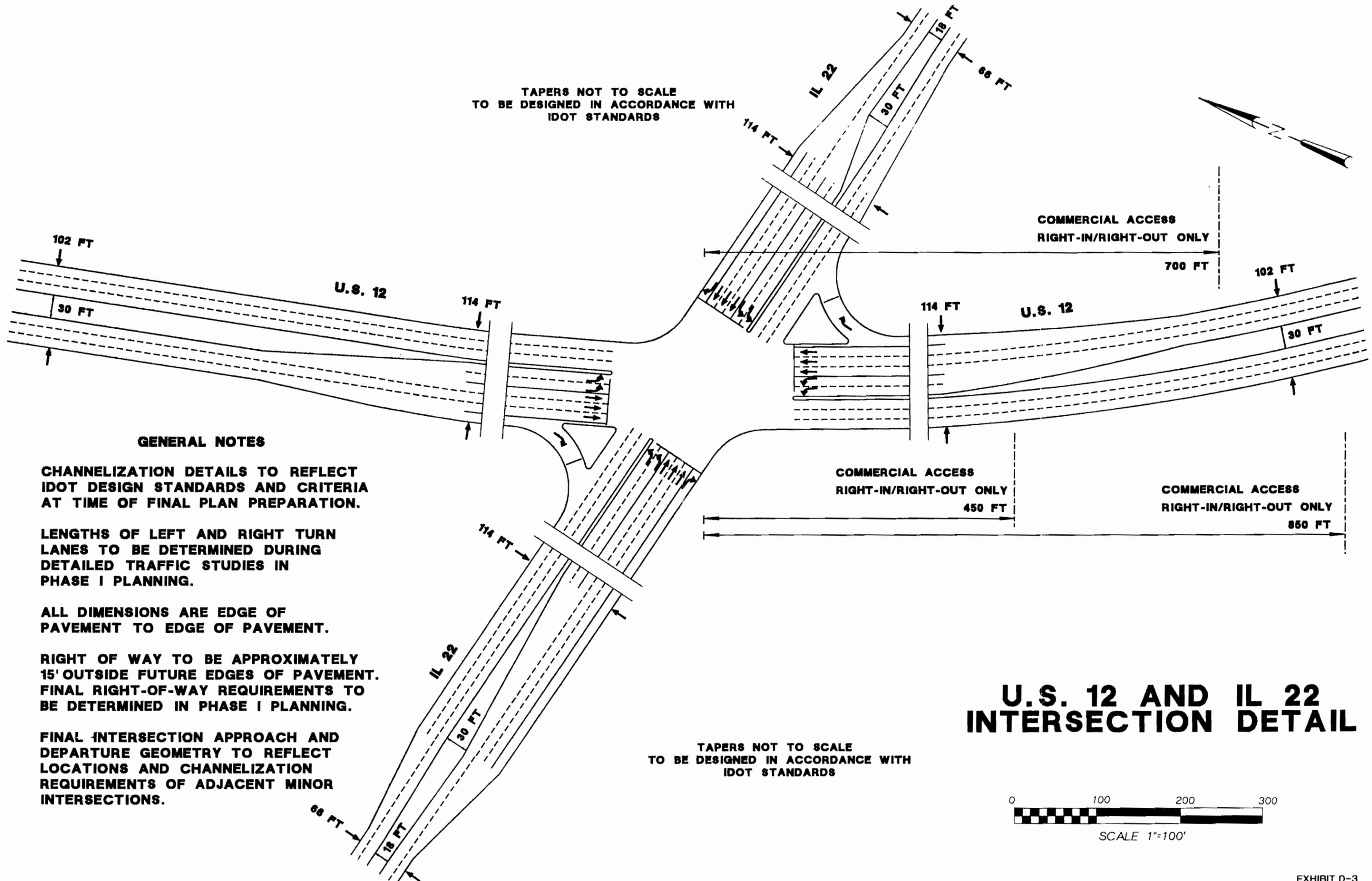


**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
 METRO Transportation Group and EJM Engineering  
 ILLINOIS DEPARTMENT OF TRANSPORTATION



TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS



**GENERAL NOTES**

CHANNELIZATION DETAILS TO REFLECT IDOT DESIGN STANDARDS AND CRITERIA AT TIME OF FINAL PLAN PREPARATION.

LENGTHS OF LEFT AND RIGHT TURN LANES TO BE DETERMINED DURING DETAILED TRAFFIC STUDIES IN PHASE I PLANNING.

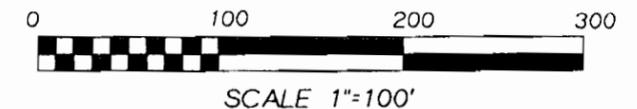
ALL DIMENSIONS ARE EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

RIGHT OF WAY TO BE APPROXIMATELY 15' OUTSIDE FUTURE EDGES OF PAVEMENT. FINAL RIGHT-OF-WAY REQUIREMENTS TO BE DETERMINED IN PHASE I PLANNING.

FINAL INTERSECTION APPROACH AND DEPARTURE GEOMETRY TO REFLECT LOCATIONS AND CHANNELIZATION REQUIREMENTS OF ADJACENT MINOR INTERSECTIONS.

TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS

**U.S. 12 AND IL 22  
INTERSECTION DETAIL**



**GENERAL NOTES**

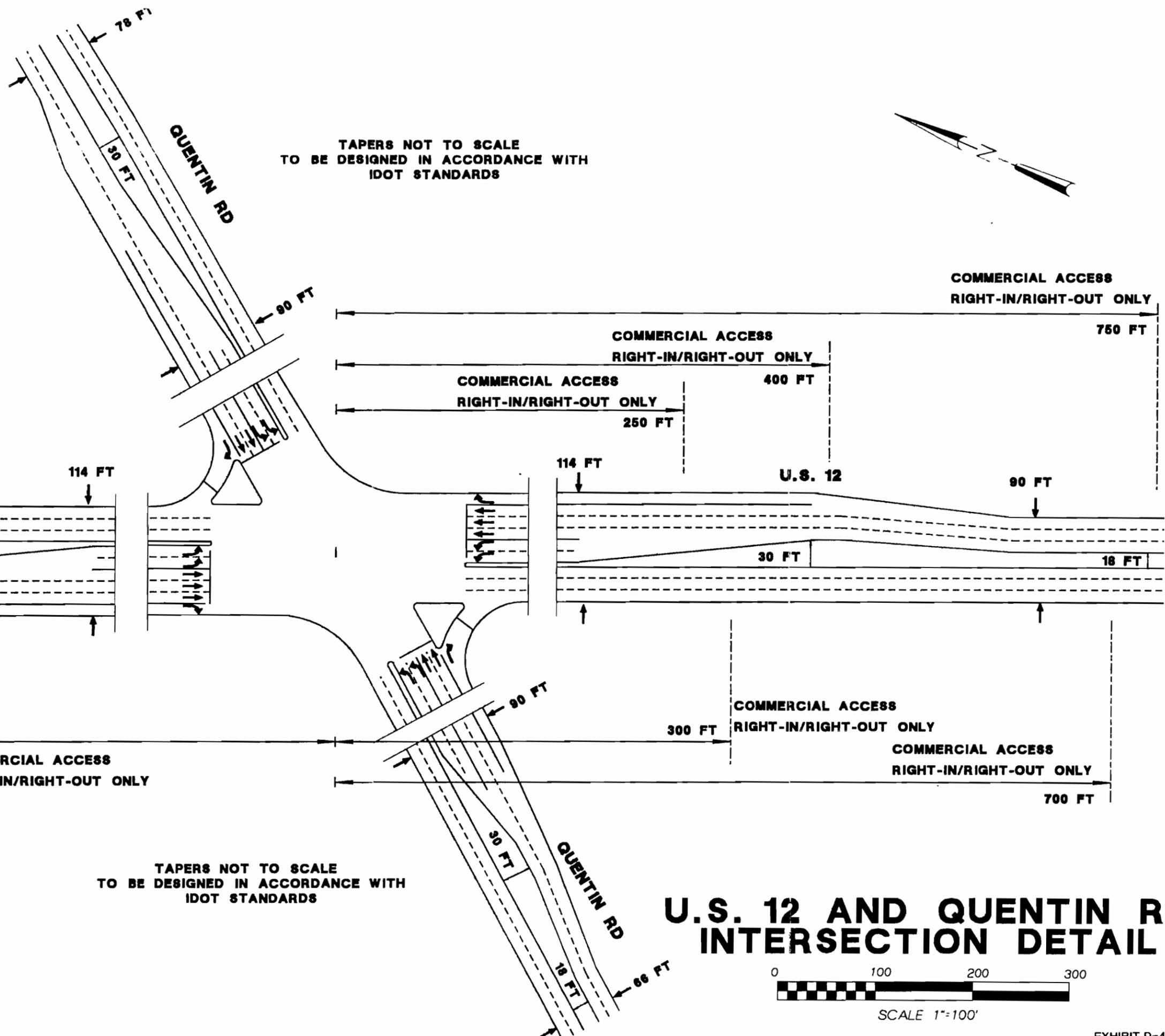
CHANNELIZATION DETAILS TO REFLECT IDOT DESIGN STANDARDS AND CRITERIA AT TIME OF FINAL PLAN PREPARATION.

LENGTHS OF LEFT AND RIGHT TURN LANES TO BE DETERMINED DURING DETAILED TRAFFIC STUDIES IN PHASE I PLANNING.

ALL DIMENSIONS ARE EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

RIGHT OF WAY TO BE APPROXIMATELY 15' OUTSIDE FUTURE EDGES OF PAVEMENT. FINAL RIGHT-OF-WAY REQUIREMENTS TO BE DETERMINED IN PHASE I PLANNING.

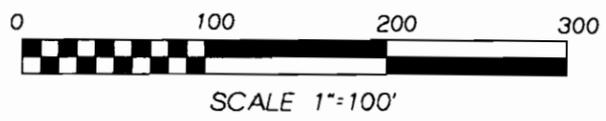
FINAL INTERSECTION APPROACH AND DEPARTURE GEOMETRY TO REFLECT LOCATIONS AND CHANNELIZATION REQUIREMENTS OF ADJACENT MINOR INTERSECTIONS.



TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS

TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS

**U.S. 12 AND QUENTIN RD  
INTERSECTION DETAIL**



**GENERAL NOTES**

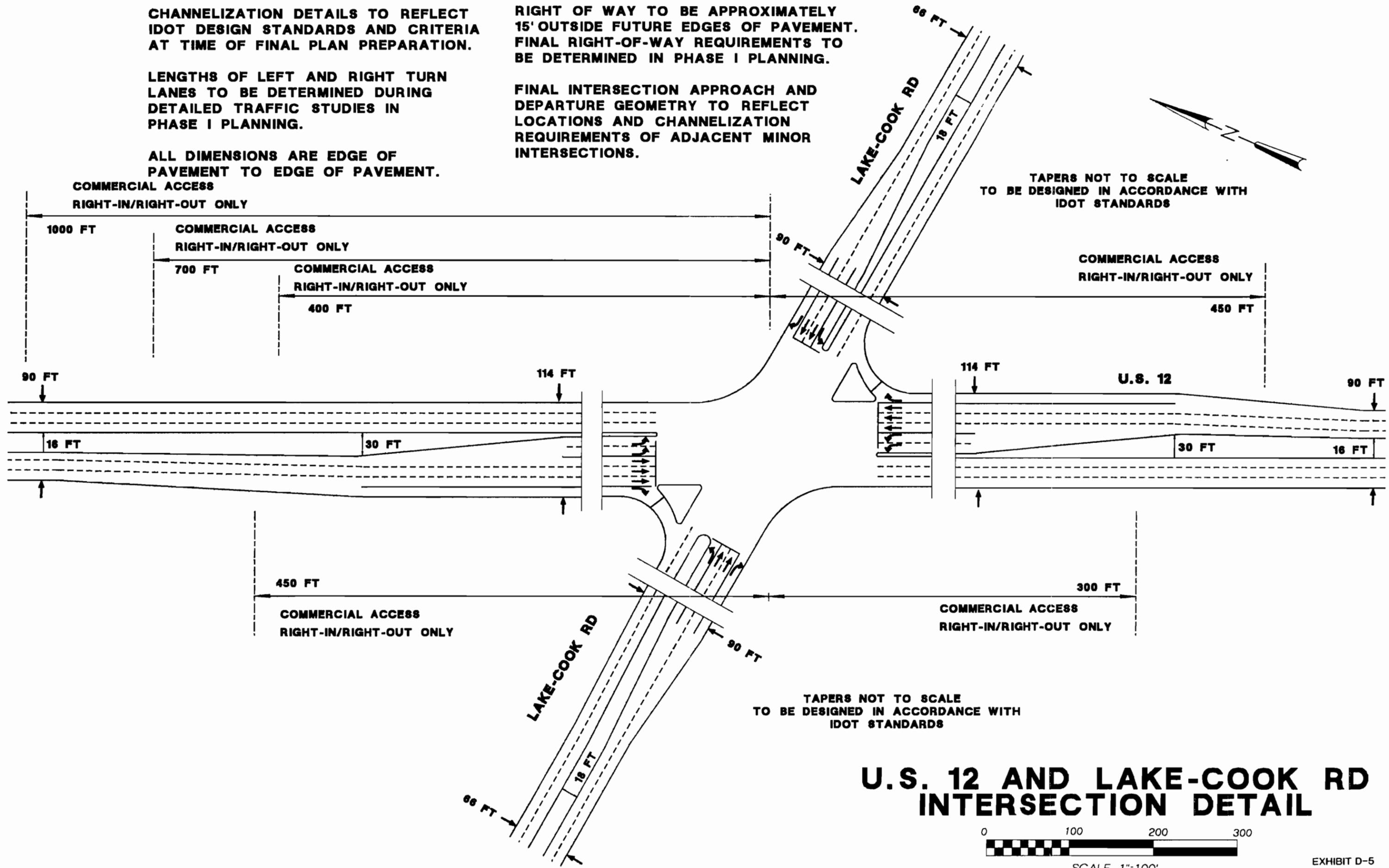
CHANNELIZATION DETAILS TO REFLECT IDOT DESIGN STANDARDS AND CRITERIA AT TIME OF FINAL PLAN PREPARATION.

LENGTHS OF LEFT AND RIGHT TURN LANES TO BE DETERMINED DURING DETAILED TRAFFIC STUDIES IN PHASE I PLANNING.

ALL DIMENSIONS ARE EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

RIGHT OF WAY TO BE APPROXIMATELY 15' OUTSIDE FUTURE EDGES OF PAVEMENT. FINAL RIGHT-OF-WAY REQUIREMENTS TO BE DETERMINED IN PHASE I PLANNING.

FINAL INTERSECTION APPROACH AND DEPARTURE GEOMETRY TO REFLECT LOCATIONS AND CHANNELIZATION REQUIREMENTS OF ADJACENT MINOR INTERSECTIONS.



**U.S. 12 AND LAKE-COOK RD INTERSECTION DETAIL**



SCALE 1"=100'

## **Segment VI——“Arlington Heights to Des Plaines” (Lake-Cook Road to Illinois 58)**

Segment VI of the U.S. 12 SRA is approximately 10 miles long, extending from Lake-Cook Road to Illinois 58 (Golf Road). Segment VI is located within Cook County. This segment includes the communities of Arlington Heights, Palatine, Mount Prospect, Prospect Heights, and Des Plaines. The proposed SRA plan is discussed in the paragraphs below and is depicted in Exhibits C-15 through C-19.

### **Cross Section and Geometric Characteristics**

The proposed cross section design was developed in an effort to obtain a continuous six-lane cross section south from Lake-Cook Road to Illinois 58 while minimizing impacts to existing land use. The existing right-of-way of 100 feet and the relatively limited available right-of-way influenced what could be accomplished with the proposed typical cross section. As a result, the typical section varies along this segment of U.S. 12. In general, the plan calls for a six-lane cross section (three lanes in each direction of travel), a closed drainage system with curb and gutter, and a continuous raised median that varies in width from 4 to 18 feet.

The proposed cross section from south of Lake-Cook Road to just south of the Illinois 53 interchange would consist of three through lanes in each direction of travel separated by a raised 18-foot median. Widening of the existing U.S. 12 cross section to accommodate the increased median dimension and the additional through lane would occur symmetrically about the existing centerline. The cross section would be compatible and consistent with the cross section proposed north of Lake-Cook Road. Note that the proximity of the existing bridge piers at the Illinois 53 bridges over U.S. 12 does not provide sufficient horizontal clearance to accommodate the proposed typical section. As a result, the two Illinois 53 structures over U.S. 12 would require reconstruction to accommodate the new six-lane section. The proposed cross section would require 120 feet of right-of-way. This would result in the need to acquire 10 feet of additional right-of-way along the east and west sides of U.S. 12.

South of Illinois 53 to Hintz Road, the proposed typical section narrows. The proximity of the Randhill Park Cemetery to the east side of U.S. 12 and the location of the residential development to the west side of U.S. 12 severely limit the ability to acquire additional right-of-way without significant impacts. Therefore, in order to maintain the

continuity of a six-lane section, the 18-foot median to the north would be reduced to 4 feet. The median would transition from 18 to 4 feet immediately south of the signalized intersection at the Frontage Road south of Illinois 53. Because the 4-foot median does not provide the necessary dimension to shelter and protect left-turning vehicles, left turns would be prohibited between the Frontage Road and Hintz Road. Access along this section would be restricted to right-in/right-out movements only. Left-turning traffic would be accommodated at the signals at the Frontage Road and Hintz Road. To further reduce the impact to existing land use, the recommended cross section proposes reducing the lane width of through lanes. The SRA desirable 12 feet per lane would be reduced to 11 feet per lane. The proposed cross section was tailored to “fit” within the existing 100 feet of right-of-way, thus avoiding any right-of-way acquisition along this portion of U.S. 12 (see Exhibit C-16).

Between Hintz and Camp McDonald Roads the proposed typical section consists of three through lanes in each direction of travel separated by a raised 16-foot median with closed drainage. At the signal at Hintz Road, the 4-foot median recommended to the north would be widened to develop a 16-foot raised median. In addition, the 11-foot through lanes introduced north of Illinois 53 are also recommended along this section of U.S. 12. The 16-foot median coupled with the use of 11-foot lanes minimizes the acquisition of additional right-of-way, while providing continuous left-turn protection. Widening would occur symmetrically about the existing centerline. Right-of-way acquisition would be 5 feet along both sides of U.S. 12, resulting in a total right-of-way dimension of 110 feet. The one exception to the typical section occurs between Arlington Heights Road and Palatine Road. At this location the proposed plan recommends a 30-foot median. The 30-foot median dimension is recommended to accommodate dual left-turn lanes along U.S. 12 approaches to the signals at Arlington Heights Road and Palatine Road. Existing right-of-way in this area is approximately 120 feet. Therefore, the required right-of-way acquisition associated with the proposed section is approximately 5 feet on both sides of U.S. 12, resulting in a total right-of-way dimension of 130 feet.

A reduced width cross section is proposed south of Camp McDonald Road to north of Schoenbeck Road. The proximity of the Old Orchard Golf Course and Rolling Green County Club to U.S. 12 limit the availability of future right-of-way along this section of U.S. 12. Therefore, the proposed typical section recommends, in conjunction with the three through lanes in each direction of travel, a flush 11-foot median. Left turns would be prohibited along this segment, except at the entrance to the Rolling Green Country Club, where a left-turn lane would be developed. All other access would be restricted to right-in/right-out movements only.

The intent of this cross section is to avoid the need for future right-of-way, therefore, mitigating any impact to the land use on either side of U.S. 12.

From north of Schoenbeck Road to the southern end of the U.S. 12, at Illinois 58, the recommended cross section consists of six, 11-foot lanes (three lanes in each direction of travel), separated by a raised 16-foot median, with closed drainage and curb and gutter. As with the other typical sections recommended along this segment, widening to accommodate the proposed cross section would occur symmetrically about the existing centerline. The right-of-way required to implement the proposed typical section would be 110 feet. This would require an additional 5 feet of right-of-way along the east and west sides of U.S. 12. The only location where symmetrical widening is not proposed is south of 3rd Avenue. At this location it is recommended that most widening occur along the west side of U.S. 12. This is proposed to minimize impacts to the Cook County Park District Property along the east side of U.S. 12.

Exceptions to the typical section occur between Central Road and Wolf Road and from south of Wolf Road to north of 3rd Avenue. Along these two stretches of U.S. 12 the proximity of adjacent residential land use to the existing right-of-way line makes it difficult to widen U.S. 12. In an effort to mitigate impacts to existing land uses, a reduced cross section is proposed. This reduced cross section would be comprised of six, 11-foot lanes, with a raised 4-foot median, all developed within the existing 100 feet of right-of-way. The 4-foot median does not provide the necessary dimension to develop left-turn lanes. Therefore, left-turn lanes would be prohibited within these areas, and access would be restricted to right-in/right-out access only.

There are spot locations where right-of-way greater than that required to implement the various typical sections would be required. These locations occur at approaches to major intersection where additional turn lanes (i.e., dual lefts) are recommended. These areas are discussed in greater detail in the following section on traffic control and are shown in the proposed plan, Exhibits C-15 through C-19.

There are other geometric improvements proposed along this segment of U.S. 12, these include off-corridor improvements. These improvements include the following:

- A two-way access road is recommended along the east side of U.S. 12, extending south from Lake-Cook Road to south of Hintz Road. This future access Road would intersect with Lake-Cook Road to the north and U.S. 12 to the south of Hintz Road. The proposed plan shows the

approximate location of this road (the exact location of this access road would be determined at a later date). This future roadway is recommended in conjunction with consolidating access along U.S. 12 south of Lake-Cook Road. It is intended to function as the focal point for access to existing and future development along the east side of U.S. 12.

- Williams Drive would be extended north across U.S. 12 and tied to Baldwin Lane. This would improve the north-south continuity of this local road. Furthermore, traffic to/from the south along Williams Drive to/from the east on Dundee Road would be diverted from the already congested Dundee Road and U.S. 12 intersection.
- South of Illinois 53, Hintz Road would be extended to the west across U.S. 12. Hintz Road would follow parallel to the existing utility line, within the utility right-of-way, and connect to the existing frontage road paralleling the east side of U.S. 12 (See Exhibit C-16). Extending Hintz Road west to the frontage road would enable access from northbound U.S. 12 to land use along the west side of U.S. 12, north of Hintz Road. The Hintz Road intersection would now serve as the left-turn access point for this existing land use. An alternative to the above recommendation is discussed in the memorandum on public hearing comments located on page V-97.
- Other geometric improvements include those associated with the intersection triangles at U.S. 12/Illinois 83/Kensington Road and U.S. 12/Mount Prospect Road/Central Road. Geometric improvements at these locations include adding local circulation roads. These areas are described in greater detail below.

Finally, this segment of U.S. 12 does not effect any known floodplains or floodways. The existing closed drainage system would be maintained along this entire segment of U.S. 12.

## **Traffic Control, Operations, and Safety**

It is essential that the SRA corridor plan for this segment establish a long-range framework that reinforces the operational and safety objectives of the SRA system. The

keys to establishing this framework are the locations of future traffic signals and the maintenance of median access control. It is especially important in this segment to modify and improve the operation of existing signalized intersections and other proposed signals to maximize the operation of the proposed six-lane cross section.

The diagrams along the top of each SRA plan exhibit indicate locations of existing and proposed signalized intersections, lane arrangements at these locations, and spacing to adjacent signals. The location of future signals were identified based on existing and future land use, safety, and overall system needs. The plan indicates the locations of median access breaks. Where a break is not shown, it is the intent of the plan that vehicles entering or exiting driveways or other existing and future access points be restricted to right-in/right-out movements only. Intersection details for key intersections within this segment are diagramed in Exhibits D-6 through D-9.

The traffic control plan for this segment of U.S. 12 calls for the retention of all but one signalized intersection between Lake-Cook Road and Illinois 58 (Golf Road). The proposed plan calls for the elimination of the existing signalized intersection, north of Arlington Heights Road, at the entrance to the commercial property. Removing this signalized intersection will provide better intersection spacing between Arlington Heights Road and the signal at the commercial entrance 1,400 feet to the north (see Exhibit C-16).

Improvements are recommended at a number of the existing signalized intersections. These improvements are proposed to help improve the capacity of the intersection and consequently improve the operation of the arterial. The most significant capacity improvements are recommended at the SRA to SRA intersections that serve this segment of U.S. 12. To promote efficient and smooth movement of traffic between SRAs the following improvements are recommended at SRA to SRA intersections.

At the U.S. 12 intersection with Palatine Road, dual left-turn lanes are recommended along the U.S. 12 approaches. A dual left-turn lane also is recommended along the westbound Palatine Road approach. Right-turn lanes also should be provided along all intersection approaches. See the intersection detail shown in Exhibit D-6 for further description.

Exhibit D-7 depicts the proposed improvements at the SRA to SRA intersection of U.S. 12 and Illinois 83 (Elmhurst Road). Due to the proximity of the Kensington Road intersection with U.S. 12 and the resulting "intersection triangle" formed by U.S. 12,

Illinois 83, and Kensington Road, intersection improvements at Illinois 83 must be made in conjunction with improvements along Kensington Road. Improvements in this area include developing access roads east and west of the U.S. 12/Illinois 83/Kensington Road intersection. These proposed access roads would eliminate left-turn movements from U.S. 12 to Illinois 83, from U.S. 12 to Kensington Road, and from Kensington to U.S. 12. The left turns from U.S. 12 to Illinois 83 and from U.S. 12 to Kensington Road would be accommodated at the new signalized intersections formed by the new access roads with U.S. 12. Eliminating left-turn movements at these intersections would reduce the number of intersection conflicts, increase the capacity of the Illinois 83 and Kensington Road intersections, and increase the green time available to U.S. 12 traffic. Other capacity improvements at the Illinois 83 intersection include dual left-turn lanes from Illinois 83 to U.S. 12.

At the SRA to SRA intersection of U.S. 12 and Illinois 58 the proposed 16-foot raised median would be expanded to a 30-foot median north of the Illinois 58. This would allow for dual left-turn lanes from U.S. 12 to Illinois 58. A single left-turn lane would be added to the eastbound Illinois 58 approach and right-turn lanes would be added to all approaches. The intersection detail for this intersection is provided in Exhibit D-9.

Other improvements to existing U.S. 12 signalized intersection are described below:

- Right-turn lanes are recommended along the U.S. 12 approaches to the Hicks Road intersection.
- The proposed 18-foot raised median would be expanded to 30 feet to develop dual left-turn lanes along the U.S. 12 approaches at the intersection with Illinois 68 (Dundee Road). Right-turn lanes also are recommended along U.S. 12.
- Right-turn lanes are recommended along U.S. 12 at the intersection with the Frontage Road (west of Illinois 53).
- The Hicks Road intersection would be converted to a conventional four-legged intersection. This improvement would be in conjunction with the proposed extension of Hintz Road west of U.S. 12. Left-turn lanes would be provided along all approaches.

- The proposed 18-foot median would be widened to 30 feet to provide dual left-turn lanes along the U.S. 12 approaches north and south of Arlington Heights Road. Right-turn lanes also are recommended along all approaches.
- Right-turn lanes are recommended along the U.S. 12 approaches at Thomas Avenue/Willow Road.
- Right-turn lanes are recommended along all intersection approaches at Euclid Avenue. In addition, dual left-turn lanes are recommended from U.S. 12 to Euclid Avenue.
- A dual left-turn lane is recommended along the Business Center Drive approach.
- At the intersection triangle formed by U.S. 12, Mount Prospect Road, and Central Road recommended improvements include developing a new access road south of the Central Road intersection. This new access road would form a signalized intersection with U.S. 12. Westbound left-turn traffic from Central Road would be accommodated at the new intersection with U.S. 12. This would eliminate the need to accommodate left-turn movements from Central Road to U.S. 12. See the intersection detail provided in Exhibit D-8.
- Right-turn lanes would be added to all approaches at Wolf Road.

New or potential future signalized intersections are recommended at four locations. A potential signal is recommended south of the Hicks Road intersection. This intersection would be formed with the termination of the proposed access road recommended to the east of U.S. 12. This signal would facilitate the safe and efficient movement of traffic to existing and future land uses served by this access road. Two new potential signals are recommended at the new access roads recommended north and south of the U.S. 12/Illinois 83/Kensington Road intersection triangle. The fourth new potential signal is recommended at the future access road south of the U.S. 12/Mt. Prospect Road/Central Road intersection triangle.

Additional right-of-way requirements, above and beyond those required for implementing the proposed typical section, will be required to implement the intersection improvements

described above. Additional right-of-way requirements would be focused at the intersection approaches and would include width required for additional turning lanes and associated tapers. Exhibits C-15 through C-19 describe additional right-of-way requirements at these intersections.

To verify the reasonableness of the recommended improvements, a planning-level intersection capacity analysis was performed. Table 29 shows the results of that analysis for all future signalized intersections along U.S. 12. The analysis utilizes CATS year 2010 SRA forecast traffic volumes as a general reference. As noted in the table, assumptions were made for minor crossroad volumes. Other capacity analysis assumptions are detailed in Appendix A.

The capacity analysis indicates that the recommended plan should produce acceptable v/c ratios at most signals along this segment. This would produce reasonable levels of service during peak periods at most locations. Calculated v/c ratios at signalized intersections ranged from 0.51 to 1.16. V/C ratios greater than 1.0 were computed at five intersections. These intersections include Illinois 68 (v/c=1.07), Arlington Heights Road (v/c=1.01), Euclid Avenue (v/c=1.04), Wolf Road (v/c=1.16), and Illinois 58 (v/c=1.13). In most cases, calculated v/c ratios in excess of 1.0 are a result of very high forecasted crossroad traffic volumes.

When developing the recommended plan (more specifically, the lane arrangements at signalized intersection) consideration was given to the likelihood that these crossroads would ever realize the long-range CATS traffic forecast and the impacts associated with providing the impacts dictated by these volumes.

## **Public Transportation**

In addition to the C&NW-Metra/Northwest Line that operates in the vicinity of U.S. 12 to the west, there are potential plans for future transit facilities. This includes the Middle Circumferential Corridor. This is a major project transit line connecting the west and north suburbs. This facility would be expected to connect suburban population centers with suburban office centers and shopping malls. In addition, the plan is intended to serve inter-connections to five existing and three proposed commuter lines serving inbound and reverse commuters. This facility is proposed to cross U.S. 12 at Palatine Road.

**Table 29**  
**Evaluation of Signalized Intersection Operations Along**  
**Segment VI (Lake-Cook Road to Golf Road) of U.S. 12**

Intersection of U.S. 12 and:	Lane Arrangements <sup>b</sup>		Year 2010 ADT (vpd) <sup>c</sup>		v/c for Intersection <sup>d</sup>
	SRA	Crossroad	SRA	Crossroad	
Hicks Road <sup>a</sup>	L-TTT-R	L-T-TR	34,100	12,000	0.70
South of Hicks Road <sup>a</sup>	L-TTT-R	L-TR	48,800	5,000	0.83
Old Hicks Road <sup>a</sup>	L-TTT TTT-R	L-R	48,800	5,000	0.83
Dundee Road	LL-TTT-R	L-TT-R	48,800	28,000	1.07
Winslowe Drive <sup>a</sup>	L-TT-TR	L-TR	38,700	5,000	0.75
Williams Drive <sup>a</sup>	L-TT-TR	L-TR	38,700	5,000	0.75
Frontage Road <sup>a</sup>	L-TTT-R	L-T-R	38,300	12,000	0.80
Wilke Road <sup>a</sup>	L-TTT TT-TR	L-T-R L-R	46,600	12,000	0.97
Hintz Road <sup>a</sup>	L-TT-TR	L-T-R	46,600	12,000	0.92
Kennicott Avenue <sup>a</sup>	L-TTT TT-TR	L-R	36,200	5,000	0.63
Mall Entry #1 <sup>a</sup>	L-TT-TR	L-T-R	34,600	5,000	0.63
Arlington Heights Road	LL-TTT-R	L-TT-R	38,100	34,800	1.01
Mall Entry #3 <sup>a</sup>	L-TTT-R	L-T-R	38,100	5,000	0.63
Palatine Road*	LL-TTT-R	LL-TTT-R L-TTT-R	38,100	42,000	0.97
Mall Entry #4 <sup>a</sup> (Dorothy Avenue)	L-TT-TR	L-T-R	35,400	5,000	0.64
Margaret Avenue <sup>a</sup>	L-TT-TR	L-T-R	35,400	5,000	0.64
Dryden Avenue <sup>a</sup>	L-TT-TR	L-T-R	35,400	5,000	0.64
Thomas Avenue/Willow Road <sup>a</sup>	L-TTT-R	L-T-TR	40,200	18,000	0.92
Olive Street <sup>a</sup>	L-TT-TR	L-T-R	40,200	12,000	0.88
Camp McDonald Road <sup>a</sup> /Oakton Street	L-TT-TR	L-TR	39,500	12,000	0.87
Schoenbeck Road <sup>a</sup>	L-TTT TT-TR	LL-R	39,500	12,000	0.82

**Table 29**  
**Evaluation of Signalized Intersection Operations Along**  
**Segment VI (Lake-Cook Road to Golf Road) of U.S. 12**

Intersection of U.S. 12 and:	Lane Arrangements <sup>b</sup>		Year 2010 ADT (vpd) <sup>c</sup>		v/c for Intersection <sup>d</sup>
	SRA	Crossroad	SRA	Crossroad	
Euclid Avenue	LL-TTT-R	L-TT-R	39,500	35,500	1.04
North of Elmhurst Road <sup>a</sup>	L-TTT-R	L-T-R	36,100	5,000	0.60
Elmhurst Road* (Illinois 83)	TTT-R	LL-TT-R LL-TT-TR	36,100	43,500	0.91
Kensington Foundry Road <sup>a</sup>	TTT-R	T-TR	36,500	20,000	0.73
South of Kensington Road <sup>a</sup>	L-TTT-R	L-T-R	36,500	5,000	0.61
Business Center Drive <sup>a</sup>	L-TT-TR	LL-R	36,500	12,000	0.78
Mount Prospect Road <sup>a</sup>	TTT-R	L-T-R L-TR	39,900	12,000	0.71
Central Road	L-TT-TR	TT-R	39,900	29,800	0.94
South of Central Road	TTT-R TT-TR	T-R L-T-R	39,900	5,000	0.60
Wolf Road	L-TTT-R	L-TT-R	40,500	35,900	1.16
3rd Avenue <sup>a</sup>	L-TTT TT-TR	L-R	40,500	5,000	0.66
Golf Road* (Illinois 58)	LL-TTT-R	L-TT-R	40,500	35,100	1.13

Note:     \*Denotes SRA corridor.  
<sup>a</sup>Assumed for unavailable volumes: 20,000 vpd for major arterials, 12,000 vpd for minor arterials, and 5,000 vpd for local roadways.  
<sup>b</sup>L = Left-turn lane; T = through lane; R = right-turn lane; and TR = through and right-turn lane.  
<sup>c</sup>ADT = Average Daily Traffic.  
<sup>d</sup>v/c = Volume to Capacity Ratio.

The Metra-Proposed Wisconsin Central Corridor Commuter Rail Service is another addition to transit service in the area. According to Metra's "Project Proposal," the new Metra service will extend north along the Wisconsin Central Line. This rail line will serve peak hour commuting between the north suburbs and downtown Chicago and eventually hourly commuting between the north suburbs and O'Hare Airport. This service will be limited to three peak hour trains during its early stages. Additional trains may later provide expanded service. Metra's routing of this line is to extend it from Des Plaines along Wisconsin Central right-of-way into Union Station. North from Des Plaines, the commuter service will terminate in Antioch. This new facility will provide 33 miles and 11 stations. Among the 11 stations, Prospect Heights and Wheeling are located closest to the corridor. In Prospect Heights the site is planned at Camp McDonald Road, just west of Wolf Road. In Wheeling the site is planned south of Dundee Road, on Wheeling Park District property, behind the Wick's Furniture Store.

In addition to proposed transit additions, improved directional signing is recommended to existing as well as future transit stations. Locations where directional guide signing is proposed include: northbound at the intersection with Lake-Cook Road to C&NW-Metra/Northwest Line Barrington Station, northbound at the intersection with Palatine Road to C&NW-Metra/Northwest Line Palatine Station, northbound at the intersection with Illinois 83 and southbound at Illinois 68 to the Wisconsin Central Line Wheeling Station, northbound at the intersection with Euclid Avenue and southbound at Illinois 53 to the C&NW-Metra/Northwest Line Arlington Park Station, northbound at the intersection with New Road (South of Kensington Road) and southbound at Arlington Heights Road to the C&NW-Metra/Northwest Line Arlington Heights Station, northbound at the intersection with Wolf Road and southbound at Camp McDonald Road to the Wisconsin Central Line Prospect Heights Station, and northbound and southbound at Palatine Road to the Middle Circumferential Corridor.

The plan identifies the locations of future park-n-ride or kiss-n-ride facilities. These facilities should be equipped to accommodate busses, carpools, and vanpools. A uniform sign system also should be established. Along this segment of U.S. 12, space should be reserved for future park-n-ride/kiss-n-ride facilities in the vicinity of the Lake-Cook Road and U.S. 12 intersection and along U.S. 12 near the Illinois 53 interchange.

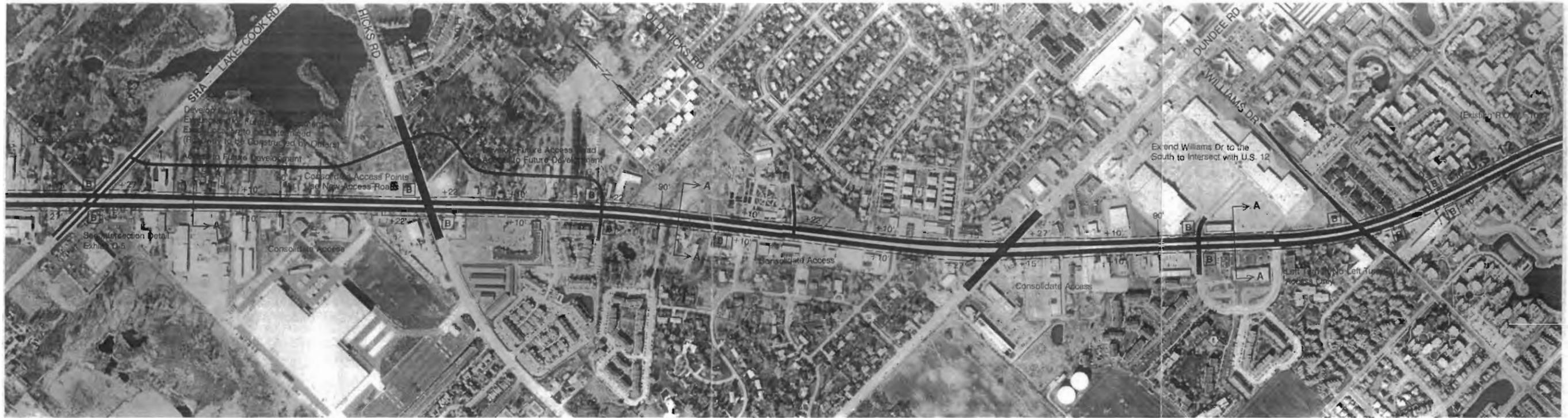
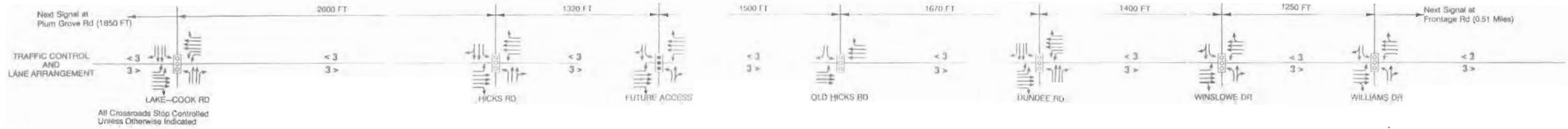
Currently bus route additions for this section of U.S. 12 are not proposed. However, future bus stops, shelters, and turnouts are recommended to serve existing Pace Bus Routes 699, 723, 698, 690, 234, 696, and 221. Locations for future bus stops, shelters, etc. have also been proposed where future bus stops or routes may be added. These bus

stops should be implemented when development and/or service needs warrant. Appropriate standards for locating and marking bus stops should be followed.

## Construction and Right-of-Way Costs

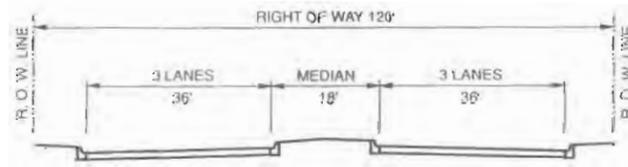
The consultant's opinion of the total cost of the recommended plan for Segment VI is \$60.8 million in 1991 dollars (see Table 30). This total includes construction costs, acquisition of right-of-way, and reconstruction of structures. The two structures carrying Illinois 53 over U.S. 12 would require reconstruction to accommodate the proposed typical section for U.S. 12. The roadway reconstruction cost is estimated to be \$50.6 million, which includes improving U.S. 12 from a four-lane roadway to a six-lane roadway with a continuous raised median and closed drainage. Other construction costs include a number of intersection improvements including the reconstruction and expansion of three SRA to SRA intersections. The right-of-way acquisition cost is based on the estimated cost of the various types of land uses that would need to be acquired. It is estimated that 15.2 acres of right-of-way will need to be acquired at a cost of \$4.7 million.

Roadway Reconstruction	\$50,620,000
Intersections/Interchanges (Future Access, Palatine Rd. [SRA], New Road, Elmhurst Rd., [SRA], New Road, New Rd, Golf Rd. [SRA])	3,400,000
Structures and Retaining Walls (Illinois 53)	2,000,000
Other	-0-
Subtotal	56,020,000
Right-of-Way	4,750,000
<b>TOTAL</b>	<b><u>\$60,770,000</u></b>



**LEGEND**

- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



**ROADWAY SECTION A-A  
LAKE-COOK RD TO SOUTH OF WILLIAMS DR**

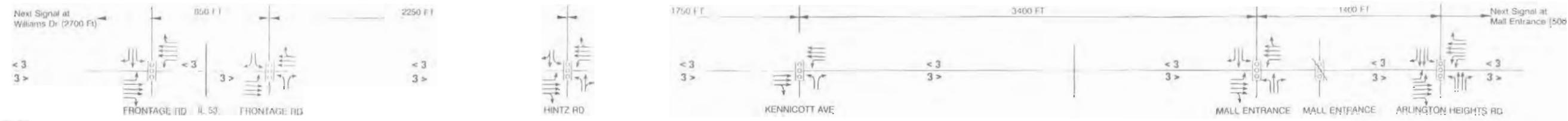
**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
**ILLINOIS DEPARTMENT OF TRANSPORTATION**

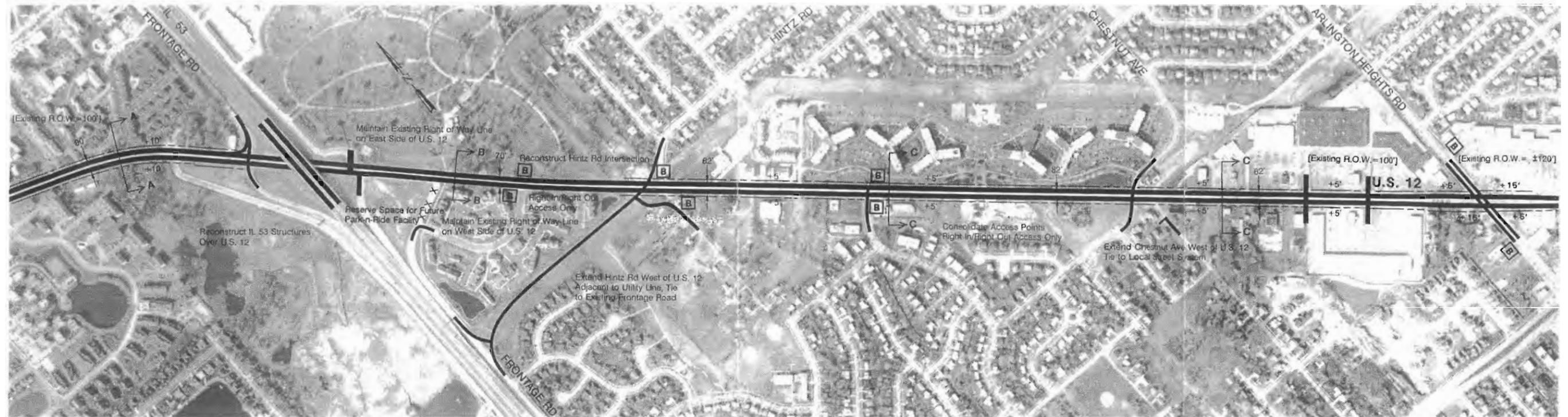


Scale: 0 200 400 FT

**TRAFFIC CONTROL AND LANE ARRANGEMENT**

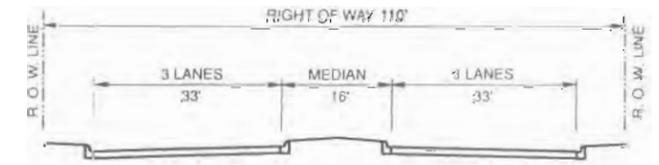
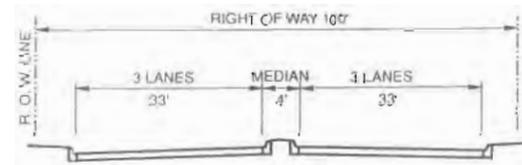
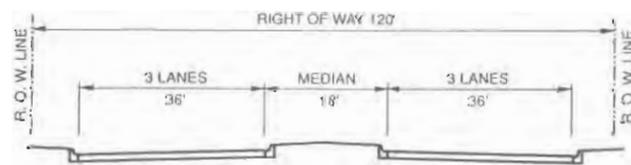


All Crossroads Stop Controlled Unless Otherwise Indicated



**LEGEND**

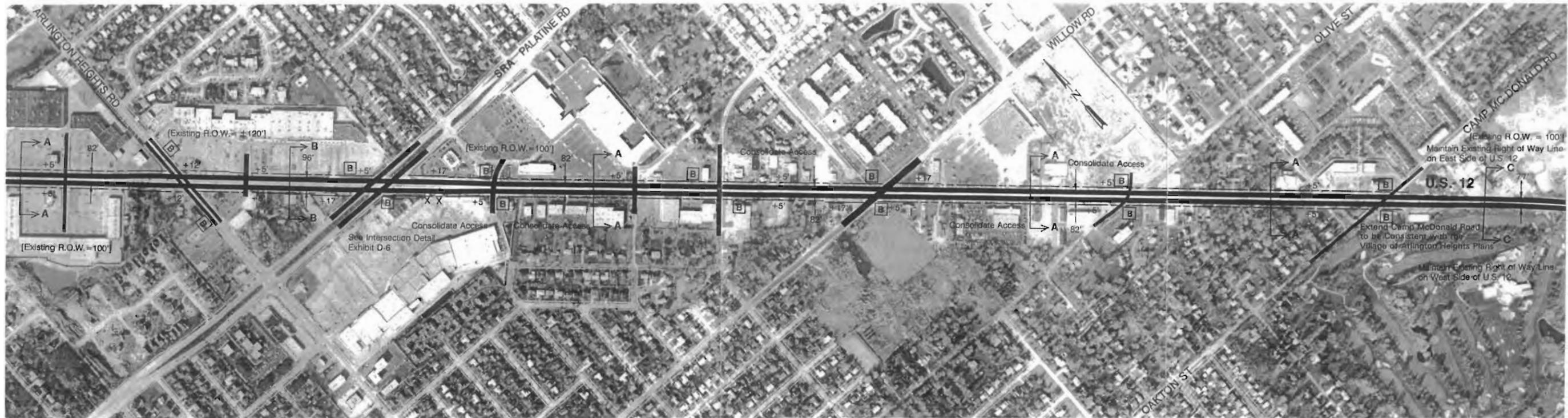
- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



**U.S. 12 PROPOSED PLAN**

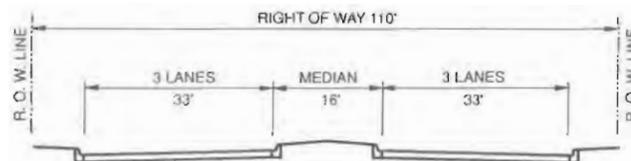
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION



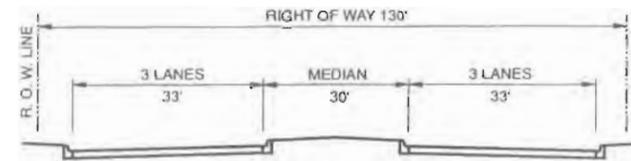


**LEGEND**

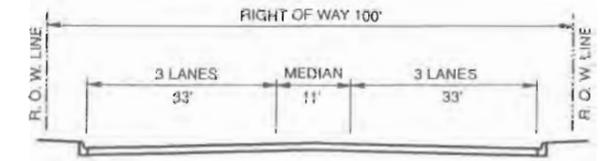
- EXISTING SIGNAL
- POTENTIAL SIGNAL
- SIGNAL TO BE REMOVED
- PROPOSED LANE ARRANGEMENT
- NUMBER OF LANES
- FUTURE RIGHT OF WAY LINE
- BUS STOP (Recommended Bus Stops Include Bus Stops on Existing Routes and Future Routes)



**ROADWAY SECTION A-A**  
NORTH OF ARLINGTON HEIGHTS RD  
PALATINE RD TO CAMP McDONALD RD



**ROADWAY SECTION B-B**  
ARLINGTON HEIGHTS RD TO PALATINE RD



**ROADWAY SECTION C-C**  
SOUTH OF CAMP McDONALD RD

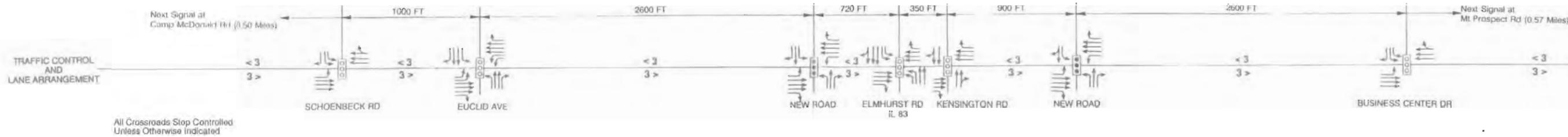
**U.S. 12 PROPOSED PLAN**

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

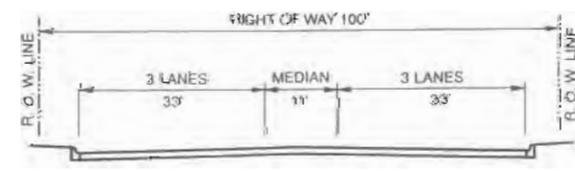
ILLINOIS DEPARTMENT OF TRANSPORTATION



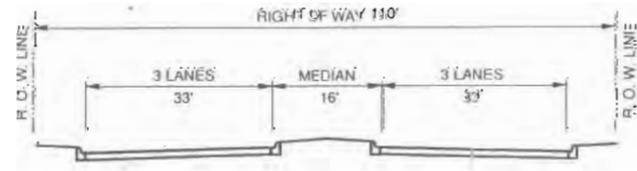
Scale: 0 200 400 feet



- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



ROADWAY SECTION A-A  
NORTH OF SCHOENBECK RD.

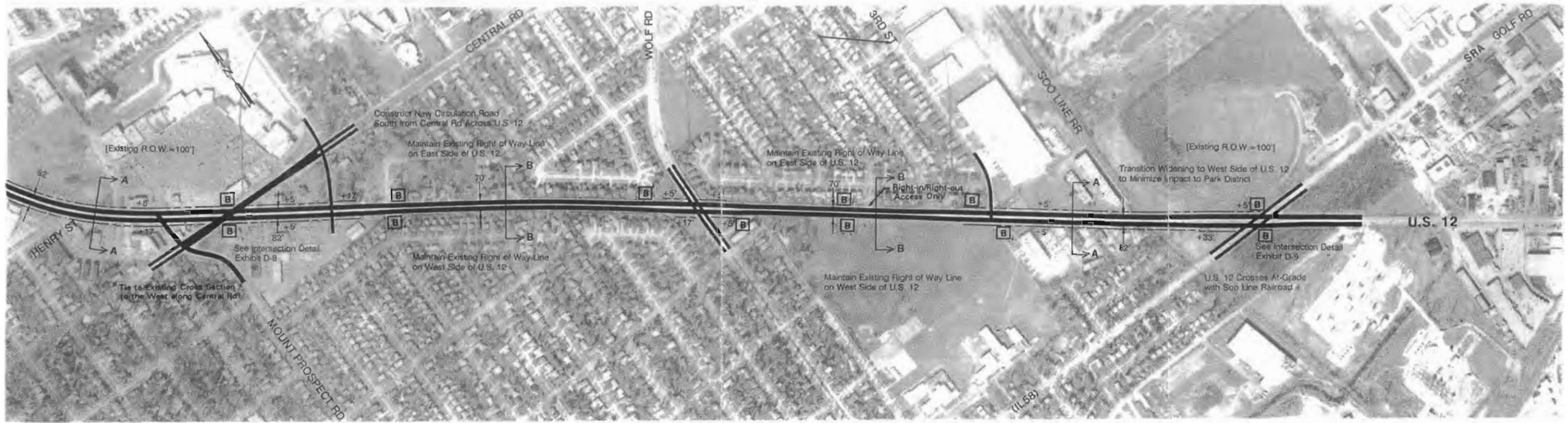
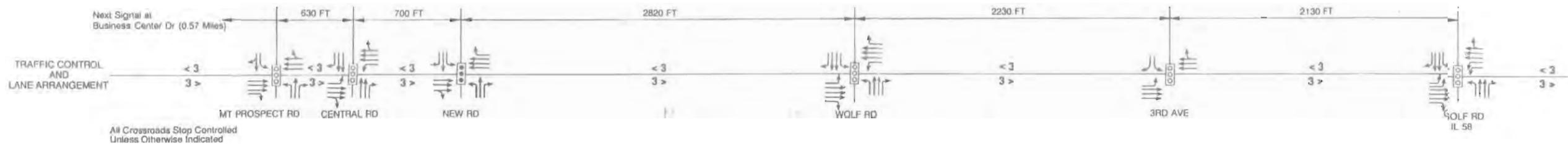


ROADWAY SECTION B-B  
SOUTH OF EUCLID AVE TO SOUTH OF BUSINESS CENTER DR

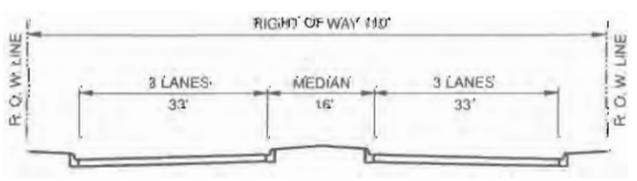
# U.S. 12 PROPOSED PLAN

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION

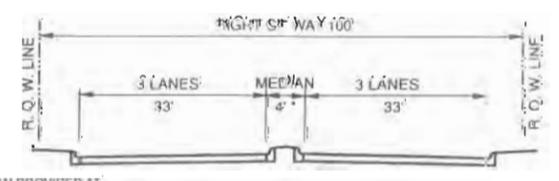




- LEGEND:**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP (Recommended Bus Stops include Bus Stops on Existing Routes and Future Routes)



**ROADWAY SECTION A-A**  
 NORTH OF MOUNT PROSPECT RD TO SOUTH OF CENTRAL RD  
 NORTH OF 3rd AVE TO GOLF RD (IL 58)



**ROADWAY SECTION B-B**  
 SOUTH OF CENTRAL RD TO NORTH OF 3rd AVE

# U.S. 12 PROPOSED PLAN

Prepared by CH2M HILL in association with  
 METRO Transportation Group and EJM Engineering  
 ILLINOIS DEPARTMENT OF TRANSPORTATION



**GENERAL NOTES**

CHANNELIZATION DETAILS TO REFLECT IDOT DESIGN STANDARDS AND CRITERIA AT TIME OF FINAL PLAN PREPARATION.

LENGTHS OF LEFT AND RIGHT TURN LANES TO BE DETERMINED DURING DETAILED TRAFFIC STUDIES IN PHASE I PLANNING.

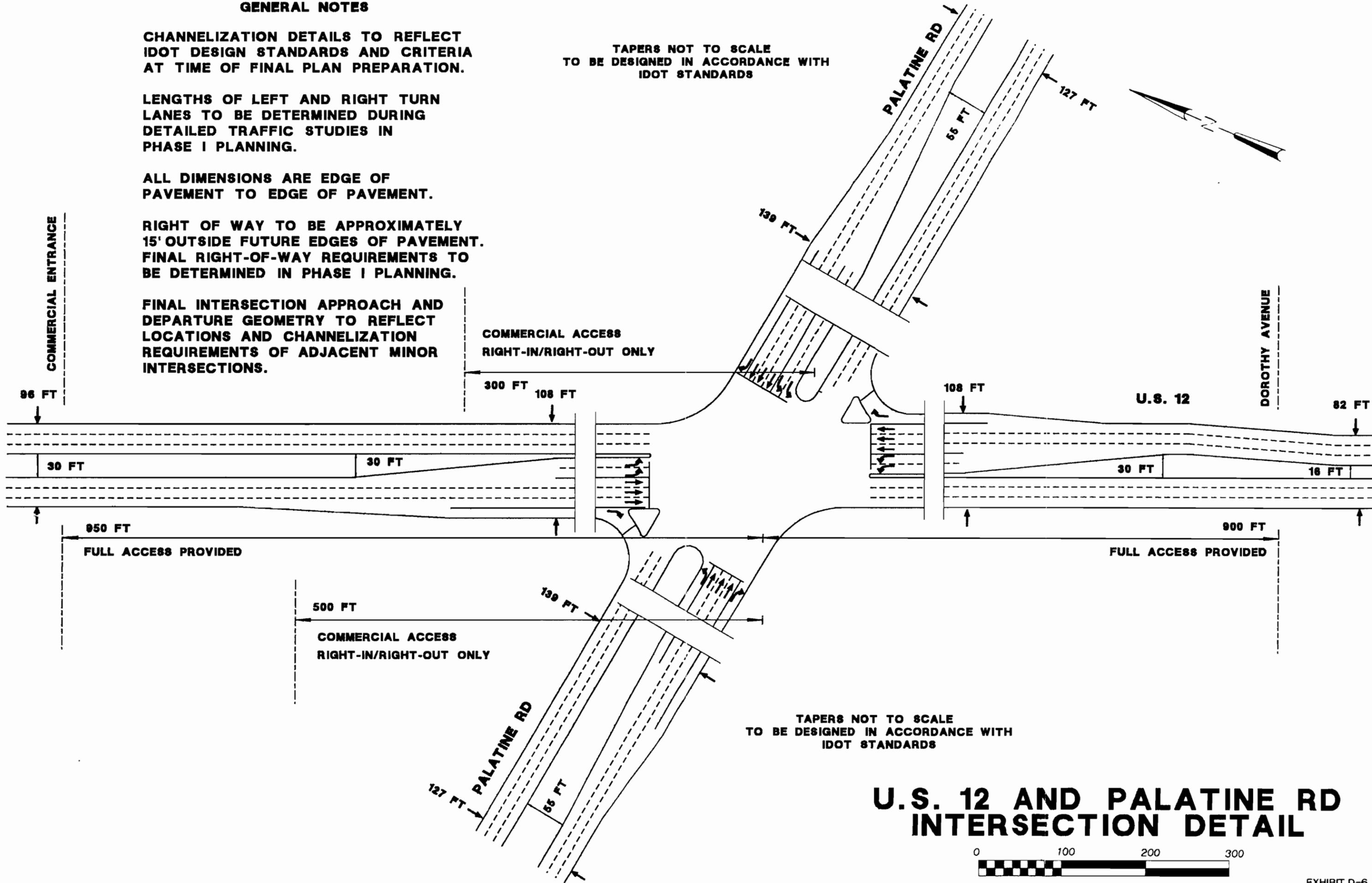
ALL DIMENSIONS ARE EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

RIGHT OF WAY TO BE APPROXIMATELY 15' OUTSIDE FUTURE EDGES OF PAVEMENT. FINAL RIGHT-OF-WAY REQUIREMENTS TO BE DETERMINED IN PHASE I PLANNING.

FINAL INTERSECTION APPROACH AND DEPARTURE GEOMETRY TO REFLECT LOCATIONS AND CHANNELIZATION REQUIREMENTS OF ADJACENT MINOR INTERSECTIONS.

TAPERS NOT TO SCALE TO BE DESIGNED IN ACCORDANCE WITH IDOT STANDARDS

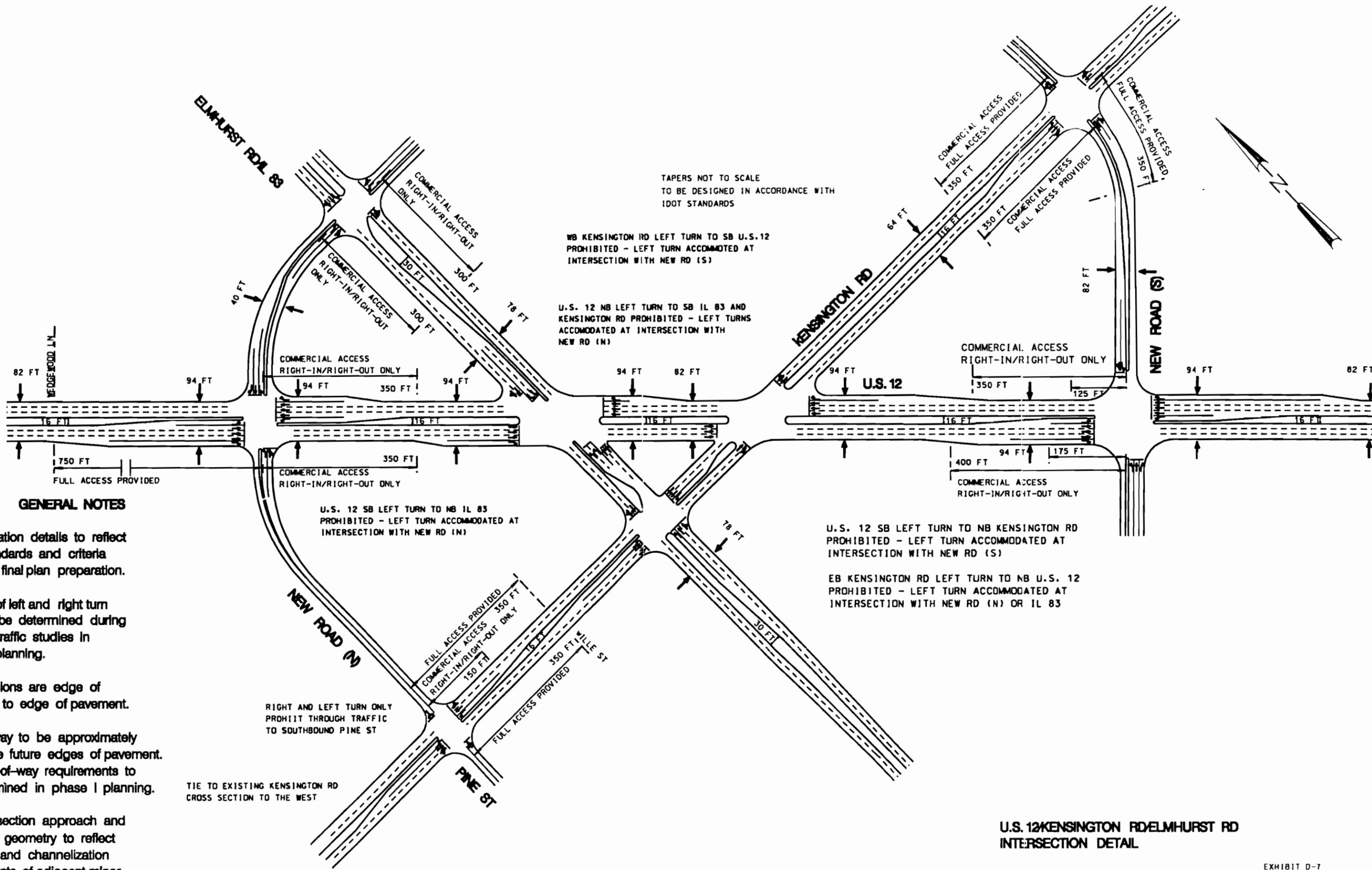
TAPERS NOT TO SCALE TO BE DESIGNED IN ACCORDANCE WITH IDOT STANDARDS



**U.S. 12 AND PALATINE RD INTERSECTION DETAIL**



SCALE 1"=100'



TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS

WB KENSINGTON RD LEFT TURN TO SB U.S. 12  
PROHIBITED - LEFT TURN ACCOMMODATED AT  
INTERSECTION WITH NEW RD (S)

U.S. 12 NB LEFT TURN TO SB IL 83 AND  
KENSINGTON RD PROHIBITED - LEFT TURNS  
ACCOMMODATED AT INTERSECTION WITH  
NEW RD (N)

U.S. 12 SB LEFT TURN TO NB IL 83  
PROHIBITED - LEFT TURN ACCOMMODATED AT  
INTERSECTION WITH NEW RD (N)

U.S. 12 SB LEFT TURN TO NB KENSINGTON RD  
PROHIBITED - LEFT TURN ACCOMMODATED AT  
INTERSECTION WITH NEW RD (S)

EB KENSINGTON RD LEFT TURN TO NB U.S. 12  
PROHIBITED - LEFT TURN ACCOMMODATED AT  
INTERSECTION WITH NEW RD (N) OR IL 83

RIGHT AND LEFT TURN ONLY  
PROHIBIT THROUGH TRAFFIC  
TO SOUTHBOUND PINE ST

TIE TO EXISTING KENSINGTON RD  
CROSS SECTION TO THE WEST

**GENERAL NOTES**

Channelization details to reflect IDOT standards and criteria at time of final plan preparation.

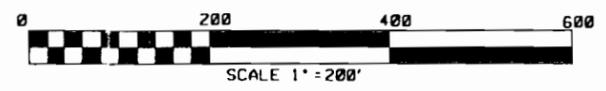
Lengths of left and right turn lanes to be determined during detailed traffic studies in phase I planning.

All dimensions are edge of pavement to edge of pavement.

Right of way to be approximately 15' outside future edges of pavement. final right-of-way requirements to be determined in phase I planning.

Final intersection approach and departure geometry to reflect locations and channelization requirements of adjacent minor intersections.

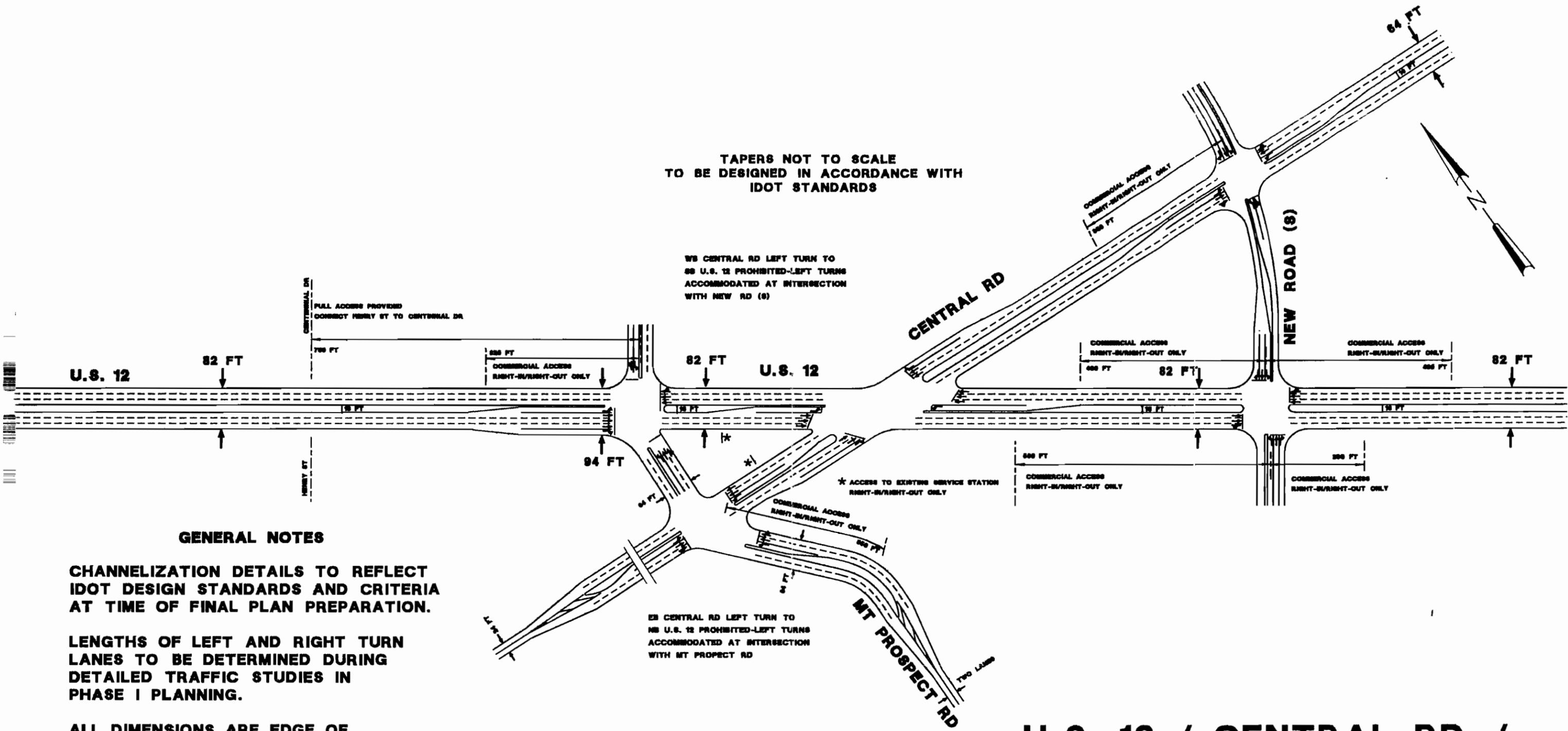
**U.S. 12/KENSINGTON RD/ELMHURST RD  
INTERSECTION DETAIL**



TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS

WB CENTRAL RD LEFT TURN TO  
SB U.S. 12 PROHIBITED-LEFT TURNS  
ACCOMMODATED AT INTERSECTION  
WITH NEW RD (S)

EB CENTRAL RD LEFT TURN TO  
NB U.S. 12 PROHIBITED-LEFT TURNS  
ACCOMMODATED AT INTERSECTION  
WITH MT PROSPECT RD



**GENERAL NOTES**

CHANNELIZATION DETAILS TO REFLECT  
IDOT DESIGN STANDARDS AND CRITERIA  
AT TIME OF FINAL PLAN PREPARATION.

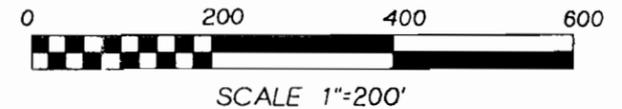
LENGTHS OF LEFT AND RIGHT TURN  
LANES TO BE DETERMINED DURING  
DETAILED TRAFFIC STUDIES IN  
PHASE I PLANNING.

ALL DIMENSIONS ARE EDGE OF  
PAVEMENT TO EDGE OF PAVEMENT.

RIGHT OF WAY TO BE APPROXIMATELY  
15' OUTSIDE FUTURE EDGES OF PAVEMENT.  
FINAL RIGHT-OF-WAY REQUIREMENTS TO  
BE DETERMINED IN PHASE I PLANNING.

FINAL INTERSECTION APPROACH AND  
DEPARTURE GEOMETRY TO REFLECT  
LOCATIONS AND CHANNELIZATION  
REQUIREMENTS OF ADJACENT MINOR  
INTERSECTIONS.

**U.S. 12 / CENTRAL RD /  
MT PROSPECT RD  
INTERSECTION DETAIL**



**GENERAL NOTES**

CHANNELIZATION DETAILS TO REFLECT IDOT DESIGN STANDARDS AND CRITERIA AT TIME OF FINAL PLAN PREPARATION.

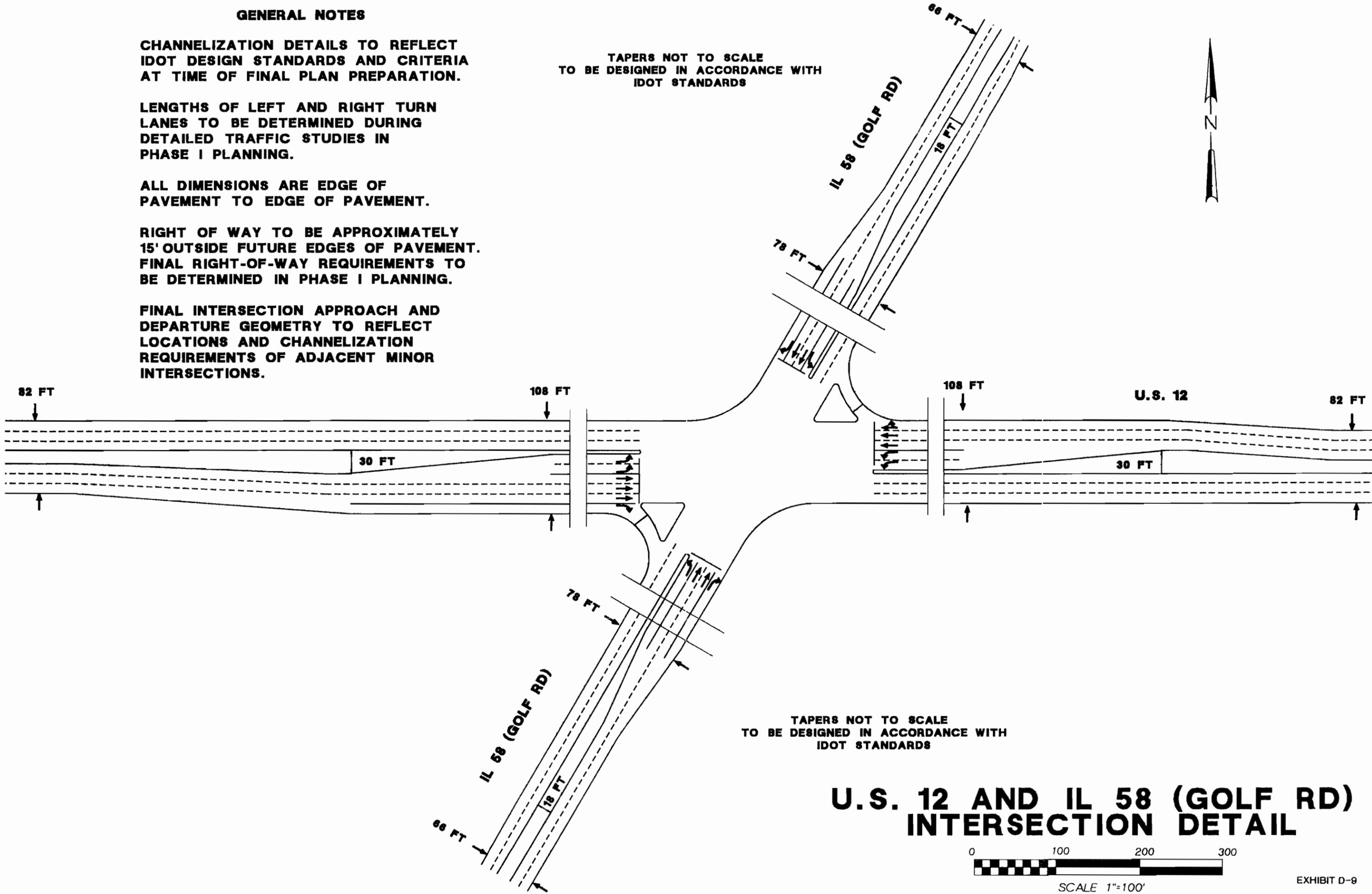
LENGTHS OF LEFT AND RIGHT TURN LANES TO BE DETERMINED DURING DETAILED TRAFFIC STUDIES IN PHASE I PLANNING.

ALL DIMENSIONS ARE EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

RIGHT OF WAY TO BE APPROXIMATELY 15' OUTSIDE FUTURE EDGES OF PAVEMENT. FINAL RIGHT-OF-WAY REQUIREMENTS TO BE DETERMINED IN PHASE I PLANNING.

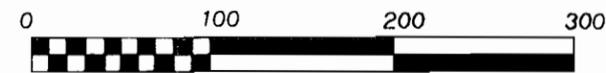
FINAL INTERSECTION APPROACH AND DEPARTURE GEOMETRY TO REFLECT LOCATIONS AND CHANNELIZATION REQUIREMENTS OF ADJACENT MINOR INTERSECTIONS.

TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS



TAPERS NOT TO SCALE  
TO BE DESIGNED IN ACCORDANCE WITH  
IDOT STANDARDS

**U.S. 12 AND IL 58 (GOLF RD)  
INTERSECTION DETAIL**



SCALE 1"=100'

## U.S. 12 Corridor Summary

This study addresses long-range transportation needs along the U.S. 12 SRA. The following paragraphs summarize the expected operations and capacity of the U.S. 12 arterial under future conditions. The summary also includes an opinion of the costs to implement the plan as recommended. In addition, because of the significant investment required for implementing the recommended plan, the prioritization scheme discussed below was developed.

### Operational Analysis of the U.S. 12 Corridor

An evaluation of traffic operations during high demand (peak) periods was performed for the entire corridor. Techniques, procedures, and assumptions consistent with the *1985 Highway Capacity Manual (HCM)*, published as Transportation Research Board Special Report 209, were used. The corridor was evaluated as a suburban, multilane highway for its entire length.

The year 2010 CATS SRA traffic forecast was used to develop theoretical peak period traffic volumes for analysis purposes. Assumptions were made for the general volumes of crossroad traffic and for patterns of turning movements.

Other assumptions for signalization (green time/cycle, cycle lengths, effects of progression) were made consistent with the intersection analyses. These assumptions are documented in Appendix A. All data requirements or assumptions were compatible with the SRA concept and guidelines in the *HCM*.

The quality of operation of U.S. 12 is a function of the character of the arterial (which affects the safe operating speed under free flow conditions), the number and spacing of signalized intersections, and the delay and level of service at those intersections.

Appendix A shows a planning-level operational analysis of each signalized intersection along U.S. 12. Table A-2 in Appendix A summarizes the operational assumptions that were used to generate the arterial analysis for each intersection and arterial segment.

Table 31 summarizes the arterial analysis of the entire U.S. 12 SRA corridor. The year 2010 CATS forecast traffic can be accommodated at level of service C or better for

**Table 31  
Summary of U.S. 12 Suburban Arterial Analysis**

Segment	Segment Length (miles)	Number of Signalized Intersections	Free Flow Operating Speed (mph)	100% of CATS "2010" Forecast	
				Average Peak Period Speed (mph)	LOS <sup>a</sup>
Illinois 31 to State Park Road	6.75	7	45	34	B
State Park Road to Kings Drive	2.30	4	35	30	A
Kings Drive to Bonner Road	7.74	11	45	35	A
Bonner Road to N. Old Rand Road	5.75	6	45	37	A
N. Old Rand Road to Ela Road	1.34	4	45	26	C
Ela Road to Plum Grove Road	3.69	6	45	32	B
Plum Grove Road to Williams Drive	2.22	7	35	22	C
Williams Drive to Kennicott Avenue	1.34	4	35	23	C
Kennicott Avenue to Thomas Ave (Willow)	2.03	8	35	21	C
Thomas Ave (Willow) to Euclid Avenue	1.44	4	35	24	C
Euclid Avenue to South of Kensington Road	0.87	4	35	19	C
South of Kensington Road to Central Road	1.18	3	35	24	B
Central Road to Golf Road (IL 58)	1.49	4	35	22	C
<b>Overall Average Arterial Speed (mph)</b>					
23					

<sup>a</sup>LOS = Level of service.

the entire length. In general, the average forecasted travel speeds are in the mid-20 to 30 mph range or higher. The exception is 19 mph between Euclid Avenue and south of Kensington.

Relatively reasonable speeds and levels of service are achievable along the entire length of U.S. 12. However, there are spot locations where intersection v/c ratios exceed 1.00. If these intersections reach their ultimate traffic, thus producing high v/c ratios, it would be reasonable to expect a reduction in level of service along the arterial at these locations. These locations will be critical to the ultimate operation of the U.S. 12 SRA.

### **Implementation Costs**

A total investment in 1991 dollars of \$196.1 to \$203.7 million will be necessary to implement the recommended plan for U.S. 12. This opinion of cost, detailed in Table 32, includes approximately \$187.3 to \$194.9 million in roadway, intersection/interchange, drainage detention, and structural improvements; and \$8.8 million in right-of-way acquisition. Because of the significant investment required for implementation, a prioritization scheme was developed. The total cost was divided into short-term, basic, and post-2010 recommendation sections.

### **Project Prioritization**

The \$196.1 to \$203.7 million implementation cost for U.S. 12 is substantial. The SRA plan will require construction over many years. Table 33 presents a suggested program of priority improvements, categorized by short-term, basic, and post-2010 recommendations.

### ***Short-Term Recommendations***

Short-term implementation recommendations represent plan elements or projects that address immediate problems and/or needs; that are generally low cost in nature; that are intended to reflect specific known plans, activities, etc.; or that are expected to occur well before the year 2010. Examples of short-term improvements include intersection upgrading and signalization, or frontage road or other localized reconstruction to accommodate planned development. The short-term recommendations along U.S. 12

**Table 32**  
**Opinions of Construction and Right-of-Way**  
**Cost for SRA Improvements Along U.S. 12 (1991 Dollars)**

**Summary of Total Cost—All Segments**

	<b>Short Term</b>	<b>Basic 2010 Plan</b>	<b>Recommended Post-2010</b>	<b>Possible Post-2010<sup>a</sup></b>	<b>Total<sup>b</sup></b>
<b>Roadway Reconstruction</b>	3,640,000	166,770,000	-0-	-0-	170,410,000
<b>Intersections/Interchanges</b>	400,000	9,900,000	-0-	7,500,000	11,000,000- 18,500,000
<b>Structures and Retaining Walls</b>	-0-	6,580,000	-0-	-0-	6,580,000
<b>Other</b>	-0-	-0-	-0-	-0-	-0-
<b>Subtotal</b>	4,040,000	183,250,000	-0-	7,500,000	187,290,000- 195,490,000
<b>Right-of-Way</b>	-0-	8,770,000	-0-	-0-	8,770,000
<b>Total</b>	4,040,000	192,020,000	-0-	7,500,000	196,060,000- 204,260,000

<sup>a</sup>Possible post-2010 items include an interchange at U.S. 12, and the relocation of Prairie Road to the east (if the land is redeveloped).

<sup>b</sup>The Total column is the sum of the Short Term, Basic 2010 Plan, and Post-2010 columns.

Table 33

U.S. 12 SRA Implementation Plan

Exhibit No.	Description of Improvement	Priority of Implements			Comment
		Short Term	Basic 2010 Plan	Post 2010	
Segment I: C-1	Implement recommended cross section Reconstruct/relocate Kuhn Road intersection Relocate North Solon Road-remove intersection form U.S. 12 Signalize East Solon Road		• • • •		Construction may be pre-2010 depending on warrant
C-2	Implement recommended cross section Signalization of Sherwood Forest Drive and Richardson Road Construct access roads		• • •		Construction may be pre-2010, depending on warrant Construction may be pre-2010, when warranted by development
C-3	Implement recommended cross section		•		
Segment II: C-4	Consolidate existing access Close Oak Street intersection to U.S. 12		• •		As re-development occurs or opportunities arise
C-5	Implement recommended cross section Signalize intersection at Kings Drive Extend Frontage Road		• • •		Signalization may be pre-2010, depending on warrant May be pre-2010, as development occurs or opportunities arise
Segment III: C-6	Implement recommended cross section Extend Frontage Roads Signalization of Brandenburg Road, Molitor Road, and Fox Lake Road Construct access roads between Molitor Road and Fox Lake Road		• • • •		May be pre-2010, as development occurs or opportunities arise or when warranted
C-7	Implement proposed cross section Signalize future access road south of Illinois 120		• •		May be pre-2010 if development occurs or warrants are met
C-8	Implement proposed cross section Signalize future access road, Case Road, and Callahan Road		• •		Or when warranted
Segment IV C-9	Implement proposed cross section Restrict access to interchanges at Illinois 176 and Illinois 59	•	•		
C-10	Implement proposed cross section Develop Frontage Road (Consolidate Access)	•	•		
C-11	Implement proposed cross section Signalize Timberlane Drive, Wynstone Extend Timberlane Drive, provide North-South access road Frontage Road north of Miller Road		• • • •		Or when warranted
Segment V: C-12	Implement proposed cross section Signalize Signal Hill—consolidate access between North Old Rand Road to Signal Hill Road Possible interchange at Illinois 22		• •	•	

Table 33

U.S. 12 SRA Implementation Plan

Exhibit No.	Description of Improvement	Priority of Implementations			Comment
		Short Term	Basic 2010 Plan	Post 2010	
C-13	Implement proposed cross section Relocate Old Rand Road intersection, develop future access road south of Old Rand Road	•	•		
C-14	Implement proposed cross section Extend Plum Grove Road south to Lake-Cook Road Develop local access road	•	• •	•	Or when re-development permits
C-15	Implement proposed cross section Develop future access road Signalize future access roads Extend William Drive	•	• • •		Or when re-development permits
C-16	Implement proposed cross section Construct Extension of Hintz Road		• •		
C-17	Implement proposed cross section Extend Camp McDonald Road to Oakton Street	•	•		To be consistent with Village of Arlington Heights plans
C-18	Implement proposed cross section Construct circulation roads north and south of the U.S. 12/Illinois 83/Kensington Road intersection Signalize intersections at new circulation roads	• •	•		
C-19	Implement proposed cross section Construct new circulation road south of U.S. 12 and Central Road intersection Signalize intersection of new circulation road and U.S. 12	• •	•		

include restricting access to the interchanges at Illinois 176 and Illinois 59. This would require the construction of cul-de-sacs and local roads to accommodate existing access.

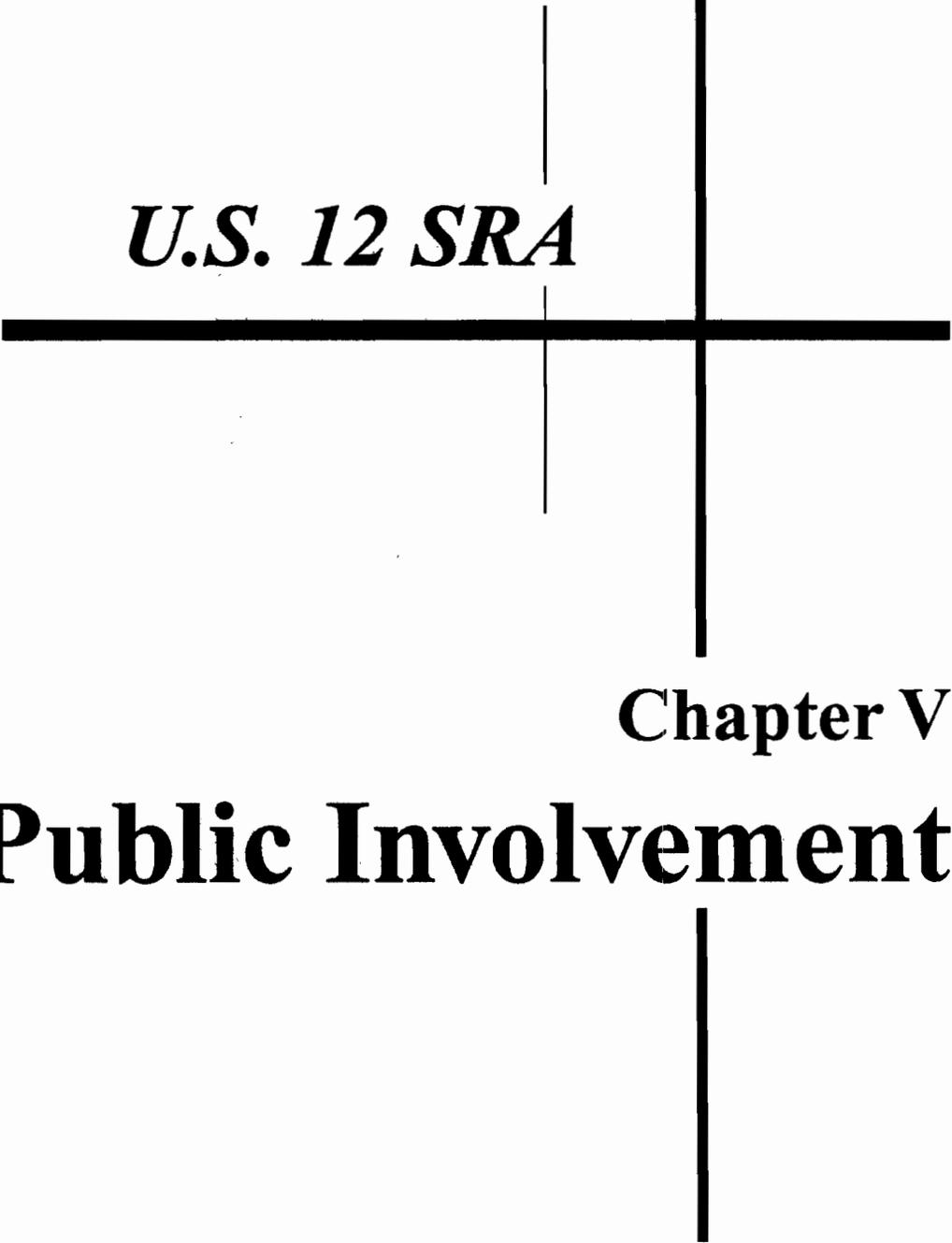
Other short-term recommendations include the reconstruction and relocation of the Old Rand Road intersection north of Case Road. In addition, the construction and signalization of access roads north and south of the intersection triangle at U.S. 12/Illinois 83/Kensington Road and the construction and signalization at the intersection triangle at U.S. 12/Mount Prospect Road/Central Drive. The total cost of this short-term plan is estimated to be \$4.04 million in 1991 dollars.

### ***Basic SRA Plan Recommendations***

Basic SRA plan recommendations represent those elements or projects to be constructed within the normal course of prioritization for any SRA project. These recommendations generally will include most plan elements not designated as short-term, with the only other notable exceptions specified as post-2010 recommendations. The total cost of the basic SRA plan is estimated to be \$192.02 million in 1991 dollars.

### ***Post-2010 Plan Recommendations***

Post-2010 plan recommendations represent elements of the SRA plan that are considered lower priority for a number of reasons. They may include high-cost elements (such as new interchanges, river crossings, etc.) for which operational needs may not occur for many years. They also include plan elements that should await implementation of other improvements whose timing is unknown or long-term in nature. All elements of the proposed U.S. 12 plan were identified as short-term or basic SRA plan recommendations. Certain elements of the plan, however are tied to anticipated future development. These plan elements would include future access roads, frontage roads, and future signalized intersection. It is possible that these plan elements would be constructed post-2010. While no post-2010 plan recommendations have been identified, a possible post-2010 item (see Table 32) would be an interchange at U.S. 12 and Illinois 22.



*U.S. 12 SRA*

**Chapter V**

**Public Involvement**

## **Chapter V**

# **Public Involvement**

### **The Public Involvement Process**

The public involvement process includes three elements: the SRA Advisory Panel Meetings, the bimonthly newsletters, and the Public Hearing.

Two Advisory Panels were established to assist/comment on the study of U.S. 12 from Illinois 31 to Illinois 58 (Golf Road). The panel included officials from McHenry County, Lake County, and Cook County as well as officials from Spring Grove, Fox Lake, Lakemoor, Wauconda, Lake Zurich, Hawthorn Woods, North Barrington, Kildeer, Deer Park, Arlington Heights, Palatine, Mount Prospect, Prospect Heights, and Des Plaines. Three Advisory Panel Meetings were held for each panel at key junctures throughout the study. At the first Advisory Panel Meetings on October 1 and 11, 1991, the existing conditions and concerns along the U.S. 12 corridor were presented. The second Advisory Panel Meetings were held March 10 and 11, 1993. At these meetings, the overall long-range alternatives for U.S. 12 were discussed and written comments were requested. The third Advisory Panel Meeting was held on October 13 and 14, 1993. At these meetings, the draft final report was reviewed with panel members.

In addition, bimonthly newsletters were published and distributed to panel coordinators, panel members, and local community officials. These newsletters were intended to update the local units of government on the study progress and issues.

Finally, three public hearing were held on October 27, November 2, and November 4, 1993. These hearings were held prior to the publishing of this U.S. 12 SRA corridor final report to allow the public to comment on the recommended plan. Responses to a summary of written and verbal comments received at the Public Hearing and in the 30-day comment period are enclosed in this section.

## **Advisory Panel Meeting Minutes**

**SUBJECT:** Strategic Regional Arterial System  
Advisory Panel Meeting No. 1  
U.S. 12 Corridor, Lake and McHenry Counties

**LOCATION:** Lake County Division of Transportation  
Libertyville, Illinois

**DATE:** October 1, 1991

**TIME:** 1:30 p.m.

**ATTENDEES:** See Meeting Roster (Attached)

**PROJECT:** CHI31495.02.A5

The SRA Advisory Panel Meeting for the U.S. 12 corridor in Lake and McHenry Counties was attended by representatives of the Illinois Department of Transportation (IDOT), Chicago Area Transportation Study (CATS), CH2M HILL, and the Corridor Advisory Panel Members. Attendees are listed on the attached Meeting Roster. All panel members were provided handouts that included a summary of the SRA network, the study area of the U.S. 12 corridor, advisory panel membership, schedule of subsequent meetings, SRA planning objectives, ultimate desirable SRA typical cross sections, exhibits describing planning focus areas, and SRA alternatives development considerations. Results and specific items discussed are outlined as follows:

1. John Reilly representing CATS opened the meeting with an introduction of the CATS year 2010 transportation plan and emphasized a) the major expressway and transit systems would not be able to carry the 2010 travel forecast demand. Therefore, the SRA system was developed to assist in serving the higher-volumes and longer length trips; b) the SRA corridors are existing roads serving local needs, and therefore, the SRA system must serve a dual role—serving high-volume/long distance trips and local needs; and c) the current study is a part of the 5-phase program helping to identify the potential ultimate configurations of the SRA corridors.
2. Rich Starr representing IDOT provided the introduction to the SRA study. Rich pointed out a) that we are currently in the second sub-network of the SRA study; b) that these studies are pre phase I studies and that there are no immediate plans for construction. Rich also pointed out that the consultants planning work and data assumes the Year 2010 transportation plan is implemented.
3. Tim Neuman from CH2M HILL provided an overview of the SRA study process and SRA design concept. Tim pointed out that what we are presenting at this first panel meeting is not only an introduction to the SRA study process, but "Planning

## MEETING MINUTES

Page 2

September 12, 1991

CHI31495.02.A5

Focus Areas." The planning focus areas that are shown on the exhibits are areas that will be paid special attention to when preparing the long range corridor plan. Tim asked the panel for their input throughout the study process.

4. Dick Stafford from CH2M HILL presented the "Planning Focus Areas" along the U.S. 12 corridor from Il. 31 south to the Lake-Cook County border.
5. Tim Neuman (CH2M HILL) ended the presentation by outlining "Strategic Regional Arterial Alternatives Development" and asking for questions and comments.

The Advisory Panel Members and attendees had these questions and comments:

1. Question: If a village receives a proposal to develop along the corridor and the SRA study indicates that a certain width of right-of-way would be required in the future, what can the villages do? Rich Starr suggested that one thing that could be done would be to ask for additional set backs. Rich commented that the state has no existing legislature or fixed policy with regards to controlling access or preserving right-of-way on SRA routes. However, the state does control where access shall be granted onto U.S. 12.
2. Question: Are there existing examples of a 6-lane cross section in the area? Rich pointed out that an example of a 6-lane cross section similar to the SRA suburban cross section would be Higgins Road or the future North Avenue.
3. Question: Will the recommended plan look exactly like the desirable suburban cross sections defined in the design concept report and shown in the handout. Tim Neuman responded that this is meant as a starting point, and that a recommended alternative could look different.
4. A comment was made that the Village of Lakemoor has plans for a future regional shopping mall on the order of one million square feet. The location of this mall would be south of Il. 120 and <sup>west</sup> east of U.S. 12.
5. Question: How will the relocated Il. 120 corridor be included in the study of U.S. 12? Rich Starr expressed that the effect of a relocated Il. 120 corridor as it relates to U.S. 12 is not part of this study.
6. A comment was made that the existing water treatment plant in the southeast quadrant of the Miller Road intersection may be closed in the next two years.

## MEETING MINUTES

Page 3

September 12, 1991

CHI31495.02.A5

7. A comment was made that one of the access points into the Pleasant Acres Park has recently been closed.
8. A comment was made that Deerpath Road has been extended across U.S. 12 to intersect and align with Pheasant Ridge Road.
9. A comment was made that NIPC is preparing the "Greenway Plan" and that the consultant should have a copy of this plan.
10. Question: Would frontage roads be considered in areas of existing development? Tim Neuman responded that even though the SRA suburban cross section does not specifically call for frontage roads, they would be considered if they are an appropriate alternative.
11. A comment was made that many existing parcels between Quentin Road and Lake-Cook Road are in holding. There are no current proposals to develop this parcel. Tim requested any land-use plans, zoning maps, comprehensive plans or other relevant information available. Tim restated the need to obtain information from all communities adjacent to the U.S. 12 corridor.
12. A comment was made that future traffic forecast for the U.S. 12 corridor are approximately double if the FAP 342 corridor is not implemented as part of the long range transportation plan. Rich Starr pointed out that the study of FAP 342 will not be finished by the time the U.S. 12 study is finished, however, the alternatives should be far enough along to make decisions regarding U.S. 12.
13. A comment was made that the railroad line extending north from Fox Lake is no longer the Chicago, Milwaukee, St. Paul, and Pacific Railroad. It has changed ownership and it is currently being used as a freight line.
14. A comment was made that the Chicago Northwestern Railroad west of Il. 31 has been converted to the McHenry County Bike Path.
15. Question: Will there be recommendations to eliminate or limit existing access at some locations? Tim Neuman responded that we would like to consolidate access along the U.S. 12 corridor. Any locations where access is removed alternatives (i.e. frontage roads) to maintain access to the land use must be investigated. In addition, where there is no current access we would like to identify the appropriate locations where future access should be permitted.

**MEETING MINUTES**

Page 4

September 12, 1991

CHI31495.02.A5

rws/MM-#2-1a



## MEETING MINUTES

CH2M HILL

**SUBJECT:** Strategic Regional Arterial System  
Advisory Panel Meeting No. 1  
U.S. 12 Corridor, Cook County

**LOCATION:** Palatine Village Hall  
Palatine, Illinois

**DATE:** October 11, 1991

**TIME:** 9:00 a.m.

**ATTENDEES:** See Meeting Roster (Attached)

**PROJECT:** CHI31495.02.A5

The SRA Advisory Panel Meeting for the U.S. 12 corridor in Cook County was attended by representatives of the Illinois Department of Transportation (IDOT), Chicago Area Transportation Study (CATS), CH2M HILL, and the Corridor Advisory Panel Members. Attendees are listed on the attached Meeting Roster. All panel members were provided handouts that included a summary of the SRA network, the study area of the U.S. 12 corridor, advisory panel membership, schedule of subsequent meetings, SRA planning objectives, ultimate desirable SRA typical cross sections, exhibits describing planning focus areas, and SRA alternatives development considerations. Results and specific items discussed are outlined as follows:

1. Eugene Ryan representing CATS opened the meeting with an introduction of the CATS year 2010 transportation plan and emphasized a) the major expressway and transit systems would not be able to carry the 2010 travel forecast demand. Therefore, the SRA system was developed to assist in serving the higher-volumes and longer length trips; b) the SRA corridors are existing roads serving local needs, and therefore, the SRA system must serve a dual role—serving high-volume/long distance trips and local needs; and c) the current study is a part of the 5-phase program helping to identify the potential ultimate configurations of the SRA corridors.
2. Rich Starr representing IDOT provided the introduction to the SRA study. Rich pointed out a) that we are currently in the second sub-network of the SRA study; b) that these studies are pre phase I studies and that there are no immediate plans for construction. Rich also pointed out that the consultants planning work and data assumes the Year 2010 transportation plan is implemented.
3. Tim Neuman from CH2M HILL provided an overview of the SRA study

## MEETING MINUTES

Page 2

October 11, 1991

CHI31495.02.A5

process and SRA design concept. Tim pointed out that what we are presenting at this first panel meeting is not only an introduction to the SRA study process, but "Planning Focus Areas." The planning focus areas that are shown on the exhibits are areas that will be paid special attention to when preparing the long range corridor plan. Tim asked the panel for their input throughout the study process.

4. Dick Stafford from CH2M HILL presented the "Planning Focus Areas" along the U.S. 12 corridor from Lake-Cook Road south to the Golf Road (Il. 58) intersection.
5. Tim Neuman ended the presentation by outlining "Strategic Regional Arterial Alternatives Development" and asking for questions and comments.

The Advisory Panel Members and attendees had these questions and comments:

1. Question: When is IDOT planning to implement the various SRA concepts? Rich Starr responded that the department is already implementing some of the concepts specified in the Design Concept Report. He pointed out that stricter access control and signal warrants were already being considered.
2. Question: Is IDOT looking for community endorsement to recommendations resulting from the study? Rich Starr responded that we are seeking an acceptance of the plan and that it is in no one's interest to develop and recommend a plan that the communities do not accept.
3. A comment was made that there was significant political fallout from the Lake-Cook Road study. Tim Neuman pointed out that if there has been previous opposition along this route (U.S. 12) or other routes we would like to know about it.

Moreover, there was considerable discussion of the expected difficulties and reaction to SRA proposals. Reference was made to the 95th St., Milwaukee Ave. and Lake-Cook Rd. studies. It is not yet clear how public reaction will affect IDOT's decision making on U.S. 12 or other routes.

4. Question: Will the name of the mayors or village presidents be in the report? The names of mayors, village presidents or panel members will not be printed in the report.
5. Question: Are you coordinating with the recommendations and results of the other

## MEETING MINUTES

Page 3

October 11, 1991

CHI31495.02.A5

studies conducted by other consultant. Tim Neuman responded that we will meet with HBA staff to discuss locations where we have crossing SRAs. We will also obtain copies of previous SRA corridor reports. Also, there is ongoing coordination within IDOT concerning Phase I studies and other planning.

6. A comment was made by Arlington Heights that they had a proposed designated bicycle path. Information regarding this will be provided.
7. A comment was made that the second corridor newsletter is in the mail to the Dave Seglin (Panel Coordinator). Dave asked if all panel members had received a copy of the first newsletter.
8. Dave Seglin asked panel members to let him know if there were additional people that should be added to the panel.

rws/#2-1b.mm



**SUBJECT:** Strategic Regional Arterial System  
Advisory Panel Meeting No. 2  
U.S. 12—Lake and McHenry Counties (North Panel)  
Corridor Limits: IL 31 to Lake—Cook Road

**LOCATION:** Lake County Division of Transportation-Libertyville

**DATE:** March 10, 1993

**TIME:** 1:00 PM

**ATTENDANCE:** See Attached Roster

**PROJECT:** CHI31495.02.A5

Rich Starr (IDOT) opened the meeting and explained the reason for the delay of the U.S. 12 SRA study. Rich explained that the project was temporarily on hold pending the outcome of a concurrent IDOT study examining the feasibility of utilizing the U.S. 12 corridor for the extension of FAP 342. Rich then turned the meeting over to Dick Stafford (CH2M HILL).

Dick began the presentation by asking everyone to introduce themselves. Dick, then made an appeal to the panel members for any new information (i.e., new development proposals, roadway improvements, land use plans, etc.) that their communities may have or may have occurred in the last year and a half. Dick then briefly summarized the content of the first panel meeting, and indicated that the minutes from the first meeting were included in the handout for this meeting. Dick also summarized the purpose and objectives of this meeting:

- The discussion of U.S. 12 from a regional perspective and a long range plan,
- A review of the existing conditions,
- A review of the "Planning Framework," including a discussion of the desirable SRA cross section for this corridor, and
- The discussion of basic system design decisions including:
  - the basic number of through lanes
  - interchange/intersection consideration

Dick added that the third panel meeting would show more detailed plans, based in part on the discussion today. Dick proceeded by describing the three exhibits to be presented, starting with the "Existing Conditions" Exhibit. Typical cross sections, areas of limited right-of-way, multiple access areas and other operational and safety issues were presented.

## **MEETING MINUTES**

Page 2

March 15, 1993

CHI31495.02.A5

Next an overview of the "Planning Framework" exhibit was discussed. The presentation included a discussion of the desirable SRA cross sections and how they relate to U.S. 12. In addition, a brief overview of the future land use adjacent to U.S. 12 was discussed. Areas where future land use was expected to intensify or change were noted. Known environmentally sensitive areas were also pointed out.

Dick continued the presentation with a general description of the "Alternatives Being Considered" exhibit. Dick began by describing alternative recommendations along U.S. 12 by segments, proceeding from north to south. This presentation included discussion of the recommended typical cross sections, including median treatments, locations where grade separations will be considered, potential locations for future signals, locations where access consolidation and access management schemes will be looked at, etc.

### **Questions and Answers/Discussion**

Subsequent to the presentation of existing conditions, planning framework and recommended improvement alternatives. The meeting was opened up to questions and answers and general discussion.

- Victor Ramirez (Lake Zurich) commented that U.S. 12 and IL 22 intersection is dangerous. He also commented that 6-lanes would be desirable along U.S. 12 at this location and that signal coordination/progression should be considered.
- Mr. Ramirez also questioned why an interchange was not shown as a potential alternative at the intersection of U.S. 12 and IL 22. He commented that the topography lends itself to a grades separation.

Dick Stafford (CH2M HILL) responded that, indeed, the topography does lend itself to a grade separation of U.S. 12 and IL 22. He also pointed out that as part of the IL 22 SRA study a number of interchange configurations were investigated and evaluated. Dick also commented on the right-of-way impacts that would result in all four quadrants, most notable the Pleasant Acres Park in the northeast quadrant, as well as concerns over the impacts to access associated with the North Lake Commons Shopping Center. Dick commented that he would be happy to share this information and discuss alternatives with Lake Zurich and that this information would be contained in both the IL 22 and U.S. 12 reports.

## MEETING MINUTES

Page 3

March 15, 1993

CHI31495.02.A5

- Mr. Ramirez also commented about the new theater development.

Dick Stafford requested any site plans or other relevant information that Lake Zurich may have.

- Tom Price (NIPC) questioned how drainage concerns would be addressed and commented about the Lake County drainage requirements and the Lake County storm water policy. He pointed out that it would probably be desirable to maintain open drainage where possible. Mr. Price also was concerned with the potential for contaminated run-off into environmentally sensitive areas.

Dick Stafford responded that the project team has retained BASCOR as our drainage consultant. Bascor will have direct input to the plan and will be responsible for reviewing drainage concerns.

- Martin Buehler (Lake County Division of Highways) asked if a future signal would be shown at the intersection of U.S. 12 and Case Road. Mr. Buehler pointed out that traffic uses this intersection and Case Road to travel west and than north on Darrell Road.

Dick Stafford requested any information regarding land use, zoning or development plans for this area, pointing out that currently we have no information. Dick commented that potential future signals were generally shown at locations where development was expected to intensify or where there was a known development activity. The signal would be shown at a location spaced no closer than a quarter mile from an adjacent signal. Dick pointed out that this location would be meet SRA criteria for the spacing of signalized intersection, and that it could be considered as a potential future signal location.

- Mr. Buehler pointed out that work at Gilmer Road/IL 120/U.S. 12 is under construction.
- Mr. Buehler pointed out that the interchange at IL 59 is not a complete interchange, and questioned what was planned for this location.

Dick Stafford responded that today IL 59 is a partial interchange, serving only movements from the south leg of IL 59 to and from the north on U.S. 12. Dick pointed out that a full interchange is located at IL 176 just the north. However, the manner in which the existing roadway system is set up makes it difficult to accommodate the movements from the south on IL 59 to/from U.S.

## MEETING MINUTES

Page 4

March 15, 1993

CHI31495.02.A5

12 north at the IL 176 interchange. Therefore the partial interchange at IL 59 does serve a system function. Dick pointed out that northbound and southbound structures carrying U.S. 12 over IL 176 would need to be widened to accommodate the third through lane in each direction. At IL 59, the structure carrying IL 59 over U.S. 12 does not have sufficient horizontal clearance between bridge piers to accommodate the additional though lanes. This structure would have to be replace. At this time the plan is to retain both interchange locations, as the detailed plan gets developed these issues will be addressed.

Dick Stafford concluded the meeting by thanking all those attending and discussing remaining work tasks and the schedule for completion. Dick pointed out that the current work plan is to develop a draft of the recommended corridor plan at 1"=400' and draft the final report over the next 2-3 months. A third panel meeting will be scheduled some time in late spring or summer to discuss the draft plan and report. Three public hearings will be scheduled and will take place sometime in summer or early fall.

It was requested that any relevant information be sent directly to CH2M HILL or through the Mark Schmidt the panel coordinator.



## MEETING MINUTES

CH2M HILL

**SUBJECT:** Strategic Regional Arterial System  
Advisory Panel Meeting No. 2  
U.S. 12—Cook County (South Panel)  
Corridor Limits: Lake—Cook Road to IL 58 (Golf Road)

**LOCATION:** Arlington Heights Village Hall—Buechner Room

**DATE:** March 11, 1993

**TIME:** 10:30 AM

**ATTENDANCE:** See Attached Roster

**PROJECT:** CHI31495.02.A5

Rich Starr (IDOT) opened the meeting and explained the reason for the delay of the U.S. 12 SRA study. Rich explained that the project was temporarily on hold pending the outcome of a concurrent IDOT study examining the feasibility of utilizing the U.S. 12 corridor for the extension of FAP 342. Rich then turned the meeting over to Dick Stafford (CH2M HILL).

Dick began the presentation by asking everyone to introduce themselves. Dick, than made an appeal to the panel members for any new information (i.e., new development proposals, roadway improvements, land use plans, etc.) that their communities may have or may have occurred in the last year and a half. Dick then briefly summarized the content of the first panel meeting, and indicated that the minutes from the first meeting were included in the handout for this meeting. Dick also summarized the purpose and objectives of this meeting:

- The discussion of U.S. 12 from a regional perspective and a long range plan,
- A review of the existing conditions,
- A review of the "Planning Framework," including a discussion of the desirable SRA cross section for this corridor, and
- The discussion of basic system design decisions including:
  - the basic number of through lanes
  - interchange/intersection consideration

Dick added that the third panel meeting would show more detailed plans, based in part on the discussion today. Dick proceeded by describing the three exhibits to be presented, starting with the "Existing Conditions" Exhibit. Typical cross sections, areas of limited right-of-way, multiple access areas and other operational and safety issues were presented.

## MEETING MINUTES

Page 2

March 15, 1993

CHI31495.02.A5

Next an overview of the "Planning Framework" exhibit was discussed. The presentation included a discussion of the desirable SRA cross sections and how they relate to U.S. 12. In addition, a brief overview of the future land use adjacent to U.S. 12 was discussed. Areas where future land use was expected to intensify or change were noted. Known environmentally sensitive areas were also pointed out.

Dick continued the presentation with a general description of the "Alternatives Being Considered" exhibit. Dick began by describing alternative recommendations along U.S. 12 by segments, proceeding from north to south. This presentation included discussion of the recommended typical cross sections, including median treatments, locations where grade separations will be considered, potential locations for future signals, locations where access consolidation and access management schemes will be looked at, etc. Dick stressed the need for considering access consolidation and access management schemes as part of the corridor plan.

### Questions and Answers/Discussion

Subsequent to the presentation of existing conditions, planning framework and recommended improvement alternatives. The meeting was opened up to questions and answers and general discussion.

- Dave Seglin (Panel Coordinator) asked if bicycles would be accommodated along the corridor, possibly utilizing extra pavement width to accommodate them.

Rich Starr (IDOT) mentioned that there is "talk" of taking width out to the parkway and adding to the inside lane, however, that would probably not be recommended along U.S. 12.

Dick Stafford (CH2M HILL) pointed out that where there are designated bike paths crossing the corridor, part of the recommended plan would be to provide safe crossings of the corridor at these locations. Dick pointed out that a principal function of the SRA is to serve long distance traffic, including providing for traffic. Accommodating bicycles traffic safely and effectively along the same pavement as SRA traffic would be difficult, and could be construed as inconsistent to the objectives of the SRA.

- Mark Schoeffmann (Arlington Heights) asked how a raised median would affect access to existing intersections.

Dick Stafford responded that "median breaks" would be provided at most

## MEETING MINUTES

Page 3

March 15, 1993

CHI31495.02.A5

intersections. The raised median would be used to control mid-block cross median access. As the planned is refined at 1"=400' these issues will be addressed.

- Eldred H. DuSold (Prospect Heights) questioned what the existing right-of-way along U.S. 12 is, and inquired as to the future right-of-way requirements. He also asked if the plan is to maintain the signal at Willow Road. Mr. DuSold also expressed concern over impacts to commercial revenues.

Dick Stafford (CH2M HILL) responded that existing right-of-way is 100 feet along U.S. 12 and that future right-of-way requirements would range from 110 to 150 feet. Future right-of-way requirements will be quantified in greater detail as refinement of the plan continues. Dick noted that the existing signal at Willow Road would be maintained.

- Mark Schoeffmann (Arlington Heights) question whether frontage roads would be considered as part of access management schemes and whether joint access management schemes would be considered.

Dick Stafford responded that access management schemes could involve frontage roads, however, considering the tight right-of-way in this area of U.S. 12 frontage roads would be difficult to implement. The recommended plan will encourage joint access agreements as part of access consolidation.

- Eldrid H. DuSold (Prospect Heights) asked about IDOT's policy towards permitting access to U.S. 12.

Rich Starr stated that the permits for access to SRA's are getting more difficult to obtain. He also stated that IDOT will not permit access to SRAs if access can be provided off of an existing cross street and not unless the access point meets SRA spacing criteria.

- A question was asked whether pedestrian crossings would be considered as part of the recommended plan.

Rich Starr (IDOT) indicated that the pedestrian issue has been a "hot" issue on many SRA studies. He pointed out the difficulties in locating appropriate locations as well as the need to provide for handicap access.

Dick Stafford (CH2M HILL) pointed out that providing for safe movement of pedestrians across SRAs is important. He pointed out that at-grade

## MEETING MINUTES

Page 4

March 15, 1993

CHI31495.02.A5

pedestrian crossings would be provided at signals where it is deemed appropriate, and the pedestrian phases could be added to the signals. He also requested information where the panel thinks pedestrian crossings may be an issue. These type of details would be finalized in future phase I studies.

- Jeff Wulbecker (Mount Prospect) questioned funding of the recommended plan and whether IDOT would consider jurisdictional transfer of the roadway.

Rich Starr (IDOT) responded that funding was not an element of the study. he also stated that the transfer of the roadway to a local community was not being considered.

- Jeff Wulbecker (Mount Prospect) questioned why the designation of U.S. 12 as an SRA ended at IL 58 (Golf Road).

Rich Starr (IDOT) pointed out that the SRA routes and their limits were identified by Chicago Area Transportation Study. The location of routes was driven by spacing and location of the routes, while the designation, urban suburban or rural was a function of population densities. He also pointed out that SRAs begin and terminate at another SRA.

- Mark Schoeffmann (Arlington Heights) commented about existing Operation Green Light projects (i.e. signal coordination) along U.S. 12.

Dick Stafford pointed out that signal coordination would be part of the plan and pointed out that as the plan gets implemented the changes in signal timing would be made to optimize the movement of traffic through the signals.

- Jeff Wulbecker (Mount Prospect) inquired as to whether a pedestrian crossing would be constructed at Thomas-Willow Road to accommodate pedestrians. he also identified the location of the Thomas Jr. High School west of U.S. 12

Dick Stafford (CH2M HILL) stated that pedestrian overpasses would not be precluded from consideration. He also pointed out other ways of providing for safe pedestrian movement.

Rich Starr (IDOT) pointed out that many questions at the public hearings have been related to pedestrian crossings at parks and schools. He stated that IDOT needs to place more emphasis on this subject.

- Tom Ponsot (Arlington Heights) asked how access would be permitted to

## MEETING MINUTES

Page 5

March 15, 1993

CHI31495.02.A5

single family homes where a raised median is recommended. Would a mountable median be considered. Would U—Turns be permitted.

Dick Stafford (CH2M HILL) stated that the location of meeting openings would be identified as the plan gets further refined. Median openings will not be provided to all existing driveways. Dick pointed out that U—turns could be provided safely, providing the intersection geometry is designed to accommodate them. In some cases access may be restricted to right in and right out only.

Rich Starr (IDOT) stated that how U—turns should be accommodated is being looked at by IDOT. He also stated that the plan may consider permitting left turn in but no left turn out at some locations.

- Dave Seglin (Panel Coordinator) expressed his concern that information was not getting out to the private sector.
- Concerns were expressed over preserving future right—of—way and impact on development in 1993 for something that may or may not occur in 2010. Parking specifically was addressed.
- Dave Seglin (Panel Coordinator) stated a grant is pending to study parking requirements to meet the Clean Air Act.
- A question was asked if The Northwest Municipal Conference would sponsor another "SRA seminar/workshop for planning commissions. Dave Seglin said he would look into this.

Dick Stafford concluded the meeting by thanking all those attending and discussing remaining work tasks and the schedule for completion. Dick pointed out that the current work plan is to develop a draft of the recommended corridor plan at 1"=400' and draft the final report over the next 2-3 months. A third panel meeting will be scheduled some time in late spring or summer to discuss the draft plan and report. Three public hearings will be scheduled and will take place sometime in summer or early fall.

It was requested that any relevant information be sent directly to CH2M HILL or through ~~the~~ Dave Seglin the panel coordinator.

**SUBJECT:** Strategic Regional Arterial System  
Advisory Panel Meeting No. 3  
U.S. 12—Lake and McHenry Counties (North Panel)  
Corridor Limits: IL 31 to Lake—Cook Road

**LOCATION:** Lake County Division of Transportation-Libertyville

**DATE:** October 13, 1993

**TIME:** 1:30 PM

**ATTENDANCE:** See Attached Roster

**PROJECT:** CHI31495.02.A5

Tim Neuman (CH2M HILL), opened the meeting by asking attendees to introduce themselves. Tim then summarized the content of the first and second panel meetings, and reiterated the background of the SRA study. Tim presented the purpose of this meeting, stating that the proposed U.S. 12 plan would be discussed in detail along with key recommendations.

The schedule for completing the U.S. 12 corridor was discussed. Tim pointed out that three public hearings would be held for this SRA: October 27, 1993 at Wauconda Park District, November 2, 1993 at the Richmond Village Hall, and November 4, 1993 at the Palatine Village Hall. Comments and questions from this panel meeting and comments and questions from the public hearings will be addressed and incorporated where appropriated in the final SRA report.

Tim Neuman than introduced Dick Stafford (CH2M HILL) to present the details of the proposed U.S. 12 corridor plan. Dick began the discussion by describing the contents of the proposed plan exhibits, beginning from Illinois 31 and continuing south to Lake-Cook Road.

The following points summarize questions concerns and areas of discussion.

- A number of comments and questions were raised regarding the recommendation to close Oak Street. Fox Lake Staff informed the consultant that this is currently used for emergency services, including fire. It was also pointed out that the Village of Fox Lake was anticipating increased development west of U.S. 12 that would access the Oak Street and U.S. 12 intersection. The Mayor of Fox Lake inquired whether there were other solutions to the problems at the Oak Street intersection other than closing Oak Street.

Any alternative developed at this location must consider maintaining access for

~~PUBLIC HEARING~~

SRA US 12

March 10, 1993

10:30  
9:30 A.M. - ~~Public Commission of the Board of Trustees~~

PANEL #2

Held at: Arlington Heights Village Hall  
33 S. Arlington Heights Road  
Arlington Heights, IL 60005

PLEASE PRINT LEGIBLY

COMMISSION Representing (phon)	NAME
CH2M HILL - 708-266-9490	Dick STAFFORD
" "	MIKE MARIANO
CITY OF PROSPECT HTS 708/398-6070	Eldred H. DuSoid
VILLAGE OF ARLINGTON HTS (708) 577-5627	Thomas J. Poncet
KATHLEEN RODI CATS	.
CATS	TOM Willman
VILLAGE of MOUNT PROSPECT	JEFF WULBECKER
Northwest Municipal Conference	Dave Seglin
IDOT	Rich Starr
Village of Arlington HTS	Bill Enright
Village of Palatine 359-9045	Michael Danecki
City of Prospect Heights	Kenneth M. BOWDER
Village of Arlington HTS	Mark Scholtzmann

## MEETING MINUTES

Page 2

October 29, 1993

CHI31495.02.A5

emergency vehicles. It was agreed that the consultant would investigate alternative solutions at this location and communicate with Fox Lake as soon as possible.

- A comment was made that the signing to northbound Illinois 59 at the approach to the interchange needed to be improved.
- A question was asked regarding access restrictions at the intersections of U.S. 12 and the frontage roads, just south of the U.S. 12 and Kings Drive intersection.

Cross median access would be prohibited at this location. Access would be restricted to right-turn in/right-turn out only. Full access to the frontage roads and exiting and future development would be focused at the new signalized intersection located at Kings Drive and U.S. 12.

- A comment was made that a fatal accident recently occurred at the intersection described above, south of Kings Drive.
- A comment was made that a shopping center was planned at the intersection of Illinois 134 and U.S. 12.

The consultant was aware of these plans and pointed out that access to this planned development should be off of Illinois 134 and/or the future frontage roads.

- Martin Buehler asked whether the signal at the Old Illinois 120 intersection should be removed.

The plan shows what IDOT is currently implementing at this location. The need for a signal at this location is uncertain because Illinois 120 is currently undergoing realignment south of this intersection and will also be signalized. The consultant will review this location with IDOT to determine whether a signal at Old Illinois 120 should be shown.

- On Exhibit C-9, access to land on the east side of U.S. 12 should be via the Bonner Road intersection. A note will be added to the plan recognizing this.
- On exhibit C-10 a note will be added stating that the recommended plan includes improvements to exiting ramp geometry at Illinois 59, including providing adequate acceleration distance for the northbound loop ramp.

## MEETING MINUTES

Page 3

October 29, 1993

CHI31495.02.A5

- It was noted that the frontage roads shown on Exhibit C-11 could not be constructed within existing right-of-way.
- Victor Ramirez pointed out that the Signal Hill Road intersection is called Honey Lake Road in Lake Zurich. Mr. Ramirez also pointed out that Exhibit B-12 incorrectly identifies the Lake County Forest Preserve. At the U.S. 12 and Illinois 22 intersection the location shown for a potential future park-n-ride facility is being planned as a future arboretum.

The appropriate exhibits will be revised to incorporate the above comments.

- Mr. Ramirez commented that there are plans for additional development in the vicinity of Deerpath Avenue and U.S. 12. A site plan for this development along with other information was transmitted to the consultant.
- A comment was made that the Quentin Road SRA ends to the south at U.S. 12, and it was questioned whether the SRA should be extended to the north.

Rich Starr (IDOT) stated that IDOT and the consultant studying the Quentin Road SRA would look into extending Quentin Road north and respond back.

Tim Neuman concluded the panel meeting by thanking the panel members for their attendance and contributions to the project.



ATTENDANCE ROSTER

SUBJECT: U.S. 12 PANEL MEETING No. 3 (NORTH PANEL)

MEETING DATE: OCTOBER 13, 1993 LOCATION: LAKE COUNTY DIV. OF HIGHWAYS

NAME	REPRESENTING	ADDRESS & PHONE
DICK STAFFORD	CH2M HILL	866-0990 EXT. 214
RICH STARR	IDOT	705-4095
Walt Clarke	Village of Northbrook	11 010 Boynton Rd - Northbrook 50018 381-3393
KATHLEEN RODA	CATS	300 W. ADAMS Chicago IL 60606 312-793-3464
Mark Schmidt	Panel Coordinator	600 W. Winchester Rd Libertyville, IL 60048
MARTIN BUEHLER	LAKE COUNTY MAYOR	SAME
Ken HANSHIE	Village of Fox Lake TRUSTEE	12 N. PISTA KOE LK RD FOX LAKE IL 60020 708-587-2100
HARLES BURKE	Village of Fox Lake Village Clerk	36 HILLCREST AVE FOX LAKE IL 60020
Jim McAlly	Village of Fox Lake Bldg Comm	301 S Rt 59 FOX LAKE IL 60020 708-587-2151
Ken Beckhardt	Village of Fox Lake SUPT. WATER & SEWER	5 Hillcrest Ave
Rick Seliger	VILLAGE OF FOX LAKE	" " "
JAMES P. Busch	Fox Lake Police	" " "
STU HOEHN	11	" " "
Victor Ramsey	Village of Lake Zurich	70 E Main St. LAKE ZURICH 540-1694
Gary Reslike	Village of Lake Zurich	70 E Main 540-1759
Ann Schmeider	Village of Kildeer	92049 Chestnut Rdg Kildeer, IL 60049
TIM NEUMAN	CH2M HILL	

**SUBJECT:** Strategic Regional Arterial System  
Advisory Panel Meeting No. 3  
U.S. 12—Cook County (South Panel)  
Corridor Limits: Lake—Cook Road to Illinois 58

**LOCATION:** Arlington Heights Village Hall

**DATE:** October 14, 1993

**TIME:** 1:00 PM

**ATTENDANCE:** See Attached Roster

**PROJECT:** CHI31495.02.A5

Tim Neuman (CH2M HILL), opened the meeting by asking attendees to introduce themselves. Tim then summarized the content of the first and second panel meetings, and reiterated the background of the SRA study. Tim presented the purpose of this meeting, stating that the proposed U.S. 12 plan would be discussed in detail along with key recommendations.

The schedule for completing the U.S. 12 corridor was discussed. Dick Stafford (CH2M HILL) commented that three public hearings would be held for this SRA: October 27, 1993 at Wauconda Park District, November 2, 1993 at the Richmond Village Hall, and November 4, 1993 at the Palatine Village Hall. Comments and questions from this panel meeting and comments and questions from the public hearings will be addressed and incorporated where appropriated in the final SRA report.

Tim Neuman than introduced Dick Stafford to present the details of the proposed U.S. 12 corridor plan. Dick began the discussion by describing briefly the proposed cross section north of Lake-Cook Road. Dick then began presenting the contents of the proposed plan exhibits, beginning from Lake-Cook Road and continuing south to Illinois 58.

The following points summarize questions concerns and areas of discussion.

- It was pointed out that Oakton Street is to be extended to the east to intersect with U.S. 12, opposite Camp McDonald Road.  
  
The plan will be revised to be consistent with the community's plans.
- There were concerns regarding access along U.S. 12 between Willow Road and Olive Street and the possibility for redevelopment. The possibility for access roads or internal circulation alternatives was discussed.

# MEETING MINUTES

Page 2

October 29, 1993

CHI31495.02.A5

- There were concerns regarding zoning issues, parking setbacks, etc. associated with strip taking of right-of-way along U.S. 12.

It was suggested that text should be added to the report to address this situation.

- A comment was made that the cul-de-sac shown along Greenwood Court just south of U.S. 12 would remove all access to this roadway. It was also pointed out that extending Greenwood to the south to intersect with Allegheny Drive may not be possible due to the school and a park.
- A comment was made inquiring whether left turn in/no left turn out access could be provided at locations other than the Rolling Green Country Club.

It was pointed out that as the plan evolves there may be the opportunity for providing left turn in access at major development locations. These locations would be studied and determined later.

- A question was asked whether any SRA improvements are being implemented.

Rich Starr (IDOT) pointed out that at some locations advanced right-of-way purchasing is being investigated. Rich also commented that IDOT's permit staff are reviewing and approving access permits to be consistent with the recommended SRA plan.

- A question was asked whether IDOT would look to local communities to plan improvements consistent or inconformance with the recommended SRA plan.

Rich stated that IDOT would look at community plans and the SRA plan together. Nothing is absolute at this time.

- Arlington Heights and Mount Prospect requested an additional Draft-Final Report.

Tim Neuman closed the presentation by discussing the prioritization of SRA improvements. Tim pointed out that most plan recommendations would be implemented as part of the SRA plan, and that no significant short-term improvements were identified. Tim concluded the meeting by thanking the panel for their participation and contributions. "\*\*\*\*\*"



## **Bimonthly Newsletters**

# SRA SPOTLIGHT

U.S. 12 CORRIDOR ADVISORY PANEL

## THE SRA PROJECT

### Introduction

The 2010 Transportation System Development Plan adopted by the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC) recognizes that not all long-distance highway travel can be handled by the expressway system. Realizing that the arterial system will have to carry some long-distance trips, the 2010 Plan designated a system of Strategic Regional Arterials (SRAs) to supplement the expressway system.

The SRA system is a 1,340-mile network of existing roads in the Northeastern Illinois region. They create a network of 66 routes intended to serve as a second tier to the expressway system. The regional highway system, consisting of existing and planned expressways and strategic regional arterials is shown on the map to the right.

Spacing of routes that comprise the SRA system was determined based upon the projected levels of future travel demand within different parts of the region, ranging from about 3 miles apart in the most densely developed areas to about 8 miles apart in predominantly rural areas. CATS estimates travel in the year 2010 will be 23 percent more than for 1980.

### Design Concepts

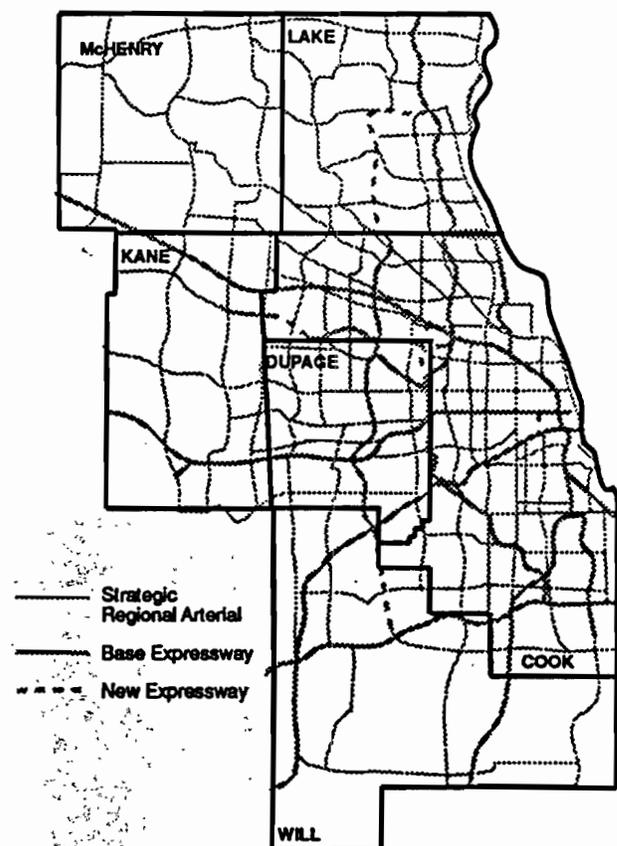
A report on design concepts for the SRA system, prepared by Harland Bartholomew & Associates, Inc., was endorsed by the CATS Policy Committee on January 31, 1991, for use as a guide but not policy in the planning of the SRA system. Some of the design techniques and concepts recommended for use in implementing the objectives of the SRA system are:

- **Signalization**—Including provision of new signals, interconnection of signals, and signal timing;

- **Intersection Improvements**—Consisting of provision of turn lanes, channelization, and restriction of certain movements;
- **Adding Lanes**—To achieve a desirable cross section for urban, suburban, and rural areas;
- **Bus Service Improvements**—Including bus stops and traffic signal preemption;

(Continued on Page 4)

2010 STRATEGIC REGIONAL ARTERIAL SYSTEM



# SRA—ONE PART OF OPERATION GREEN LIGHT

SRA is one part of a much larger project to address traffic congestion: Operation Green Light. Other activities are outlined below.

## Develop Major Transit/Highway Facilities

This element will contribute to freeway and transit projects in the 2010 Plan. Also, it will begin engineering studies and preserve right-of-way for future routes.

## Improve Other Key Arterial Roadways

If the SRA network is to carry regional traffic, the remaining roadways must play a more important role in carrying local traffic. This element will address improvements that will make them more efficient.

## Identify Strategic Transit Improvements

There are two goals for this element: (1) to make

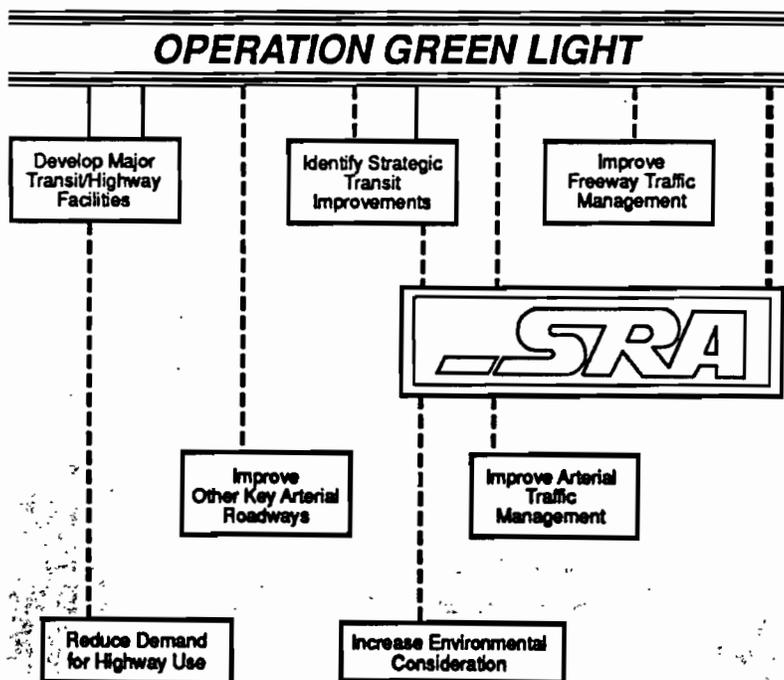
transit more convenient and swift and (2) to encourage more pedestrian and bicycle routes.

## Improve Freeway Traffic Management

Information about accidents and blocked lanes is available almost immediately. This element will develop ways to provide this information to other drivers and to emergency personnel more quickly. Other priorities are controlling the rate at which vehicles enter the freeway and continuing the installation of new toll collection equipment.

## Improve Arterial Traffic Management

Like freeways, better information systems for these routes will reduce congestion. Providing this information to individual drivers will require sophisticated systems. New equipment for private cars is being tested. Traffic signal networks are also very important. SRA will address these same topics.



## Reduce Demand for Highway Use

This element examines ways to reduce the number of vehicles on the road, particularly at rush hours. Increasing the number of people in each vehicle is the purpose of most strategies. Ride-sharing and mass transit offer ways that commuters can help. Businesses could offer preferred parking to people sharing rides and support the costs of sharing rides. This element also encourages shifting work schedules.

## Increase Environmental Consideration

Studies of ways to reduce noise and air pollution, to improve the appearance of roads, and to increase cooperation among local governments are all part of this element.

# STRATEGIC REGIONAL ARTERIALS AND THE ROADWAY HIERARCHY

As shown in the illustration below, the two most important factors that define the classification of a street are its access function and movement function. Street classifications range from the freeway, which has complete access control and carries mostly through traffic, to local streets with unrestricted access and no through traffic.

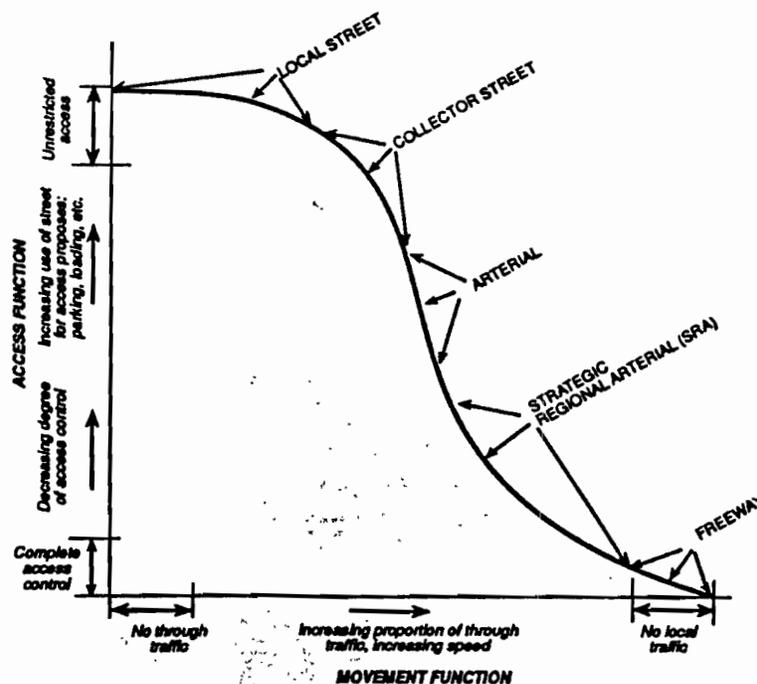
**Freeway**—The function of a freeway is to provide regional transportation for large volumes of traffic over long distances. There is no parking on a freeway. Access is controlled by on- and off-ramps that are generally spaced at least a mile apart. Distance or height often separate the freeway from the land around it. Expressway, superhighway, parkway, and tollway are all terms used to describe freeway-like roads.

**Strategic Regional Arterial (SRA)**—A second tier to the freeway system. These routes were selected because they carry, or are projected to carry, large volumes of long-distance traffic. As a group, they form a network that can carry such traffic to and from locations the freeway system cannot. They can also handle some of the overflow from the freeway system. Because of their strategic importance to regional travelers, IDOT and CATS are working to ensure they receive needed improvements. Recommendations concerning parking, access, traffic control, transit, lane additions, and intersection widening are examples of typical improvements.

**Arterial**—An arterial has two functions: (1) the primary purpose of an arterial road is to carry traffic within the region; and (2) it serves the homes and businesses along it. Parking is sometimes allowed, especially in older commercial centers. Other streets and the properties along it are connected directly. Usually, the roadway is not separate from the land around it.

**Collector**—The collector street directs traffic from local streets to arterials or local destinations such as shopping, schools, and office developments. The collector looks like the arterial, but it covers less distance, so it carries less regional traffic.

**Local**—A local street provides access to property. Moving traffic is a secondary function. Local streets route traffic onto a collector or arterial street as quickly as possible. Parking is usually allowed.



MOVEMENT ACCESS FUNCTION OF ROADWAY TYPE

Reference: Institute of Traffic Engineers, *System Considerations for Urban Arterial Streets*, October 1969. (Modified by CH2M HILL)

# THE SRA PROJECT (Continued from Page 1)

- **Access Management**—To reduce conflicts and improve safety;
- **Median Control**—To provide for left-turning vehicles, direct turning movements to desired locations, and reduce centerline conflicts;
- **Structural Clearance Improvements**—Both vertical and horizontal clearances;
- **Traffic Operational Improvements**—Such as signing and pavement markings; and
- **Drainage Problem Correction**—Whenever required.

The design concepts also address criteria and conditions from removal of curb parking and implementation of high-occupancy vehicle (HOV) lanes.

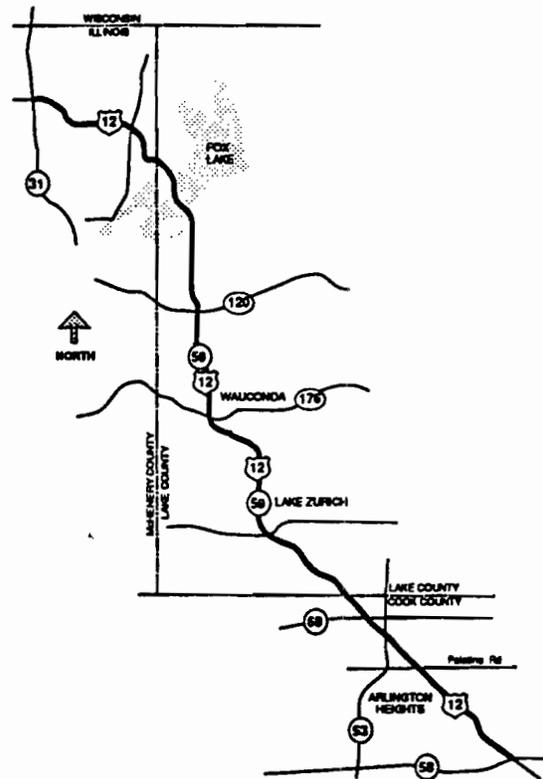
## Studies of SRA Routes

The concepts and standard developed thus far and modified or enlarged upon as work progresses will be applied to the entire 1,340 miles of SRA routes in five consecutive studies. This study, being accomplished by the consulting firm of CH2M HILL, Inc., is concerned with a total of 305 miles of SRA routes in 12 corridors. The routes selected for this phase of the SRA study process reflect a variety of area types—from rural U.S. 14 in McHenry County to suburban settings such as Barrington Road in Cook County or County Farm Road in Du Page County, and urban Pershing Road and Archer Avenue in the City of Chicago. The resultant plans for each of these routes will include both short- and long-term improvements. Studies will be made of additional sets of roadways each year beginning in 1992 until the entire SRA system has been completed.

A second part of this project consists of identifying and evaluating performance parameters to be used for increasing the effectiveness of various improvements along the SRA routes. This work will be carried on concurrently with the individual SRA corridor analyses.

## The U.S. 12 Corridor

The map pictured below shows the extent of the U.S. 12 SRA Corridor. The U.S. 12 Corridor extends from Golf Road to Illinois Route 31, passing through Cook, Lake, and McHenry Counties, for a total length of approximately 38 miles. This Advisory Panel is concerned with the portion of the corridor from Golf Road to Lake-Cook Road in Cook County.

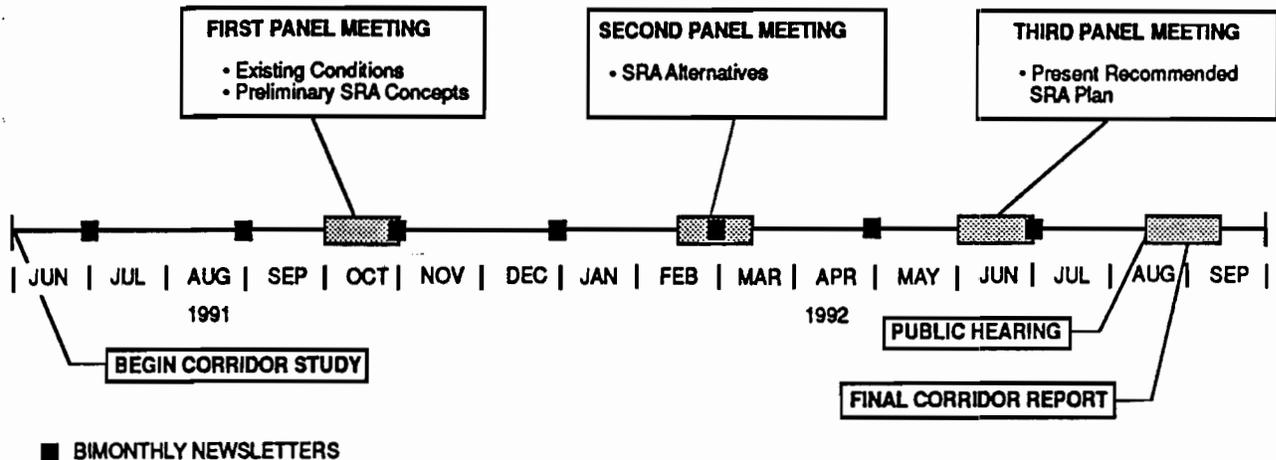


---

# STUDY PROCESS AND SCHEDULE

---

## CORRIDOR 2—U.S. 12 FROM GOLF ROAD TO ILLINOIS ROUTE 31



---

## ROLE OF THE ADVISORY PANEL

---

### Who should be on the Panel?

The panel is composed of government representatives of jurisdictions along this corridor. The panel may also wish to add representatives from business and community organizations along the route.

### What are the duties of the Panel?

The panel is responsible for reviewing and commenting on the study recommendations and conclusions. Panel members also assist the consultant team by identifying and assembling specific data and information about land use, transportation, and development within their respective jurisdiction. During July and August, the Chicago Area Transportation Study (CATS) will be contacting the advisory panels on behalf of the consultant team to gather corridor-specific data.

### How often will the Panel meet?

There are three planned Panel meetings involving the consultant, the Illinois Department of Transportation, and CATS. The Advisory Panel may also elect to meet at other times. It would be the responsibility of the coordinator of the Panel to inform members of topics and arrange the program.

### Will the consultants be available to meet separately with representatives of all the communities along the route?

No. The Advisory Panels are the only formal community contact included within the contract for consultant services. However, the consultant team does plan to meet informally with community officials, as needed, to gather information and identify local concerns.

# SPOTLIGHT ON THE SPOTLIGHT

## What to Expect in Future Editions...

The SRA Spotlight will be issued about every 2 months during the course of the study. Future issues will be designed to keep you abreast of study progress and answer your questions. Some features of future Spotlights will be:

- Reports on project developments such as panel meetings, public hearings, and other forums;
- A regular section presenting answers to questions raised at corridor meetings for this corridor, or in other corridors if the information would be universally useful;
- A status report to keep you up-to-date on study findings, and recommendations; and
- Announcements of forthcoming activities that will involve panel members and others in the corridor.

There is also a form on the facing page that you are encouraged to use to give us your views and ideas regarding future issues of the Spotlight.

.....  
**SRA SPOTLIGHT**  
.....

**Publisher:**  
The Illinois Department of Transportation

**Editor:**  
**CHM HILL**

**For:**  
The Strategic Regional Arterials Plan

**Advisory Panel**

**Coordinator:**  
David Seglin  
Northwest Municipal Conference

**Panel Members:**  
Arlington Heights  
Des Plaines  
Mt. Prospect  
Palatine  
Prospect Heights

**For More Information, Please Contact:**

David Seglin  
Northwest Municipal Conference  
1616 East Golf Road  
Des Plaines, Illinois 60016



# SRA SPOTLIGHT

U.S. 12 CORRIDOR ADVISORY PANEL

## THE SRA PROJECT

### Introduction

The 2010 Transportation System Development Plan adopted by the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC) recognizes that not all long-distance highway travel can be handled by the expressway system. Realizing that the arterial system will have to carry some long-distance trips, the 2010 Plan designated a system of Strategic Regional Arterials (SRAs) to supplement the expressway system.

The SRA system is a 1,340-mile network of existing roads in the Northeastern Illinois region. They create a network of 66 routes intended to serve as a second tier to the expressway system. The regional highway system, consisting of existing and planned expressways and strategic regional arterials is shown on the map to the right.

Spacing of routes that comprise the SRA system was determined based upon the projected levels of future travel demand within different parts of the region, ranging from about 3 miles apart in the most densely developed areas to about 8 miles apart in predominantly rural areas. CATS estimates travel in the year 2010 will be 23 percent more than for 1980.

### Design Concepts

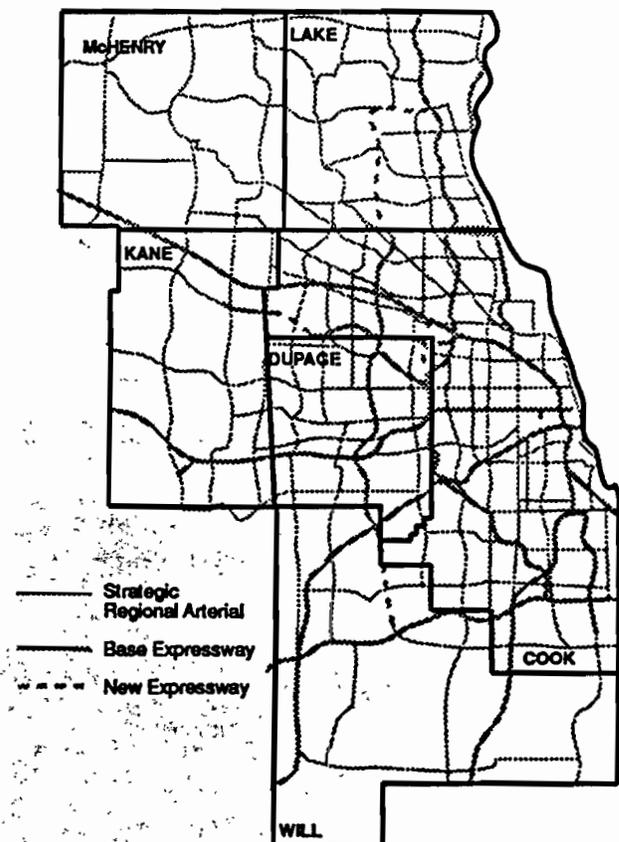
A report on design concepts for the SRA system, prepared by Harland Bartholomew & Associates, Inc., was endorsed by the CATS Policy Committee on January 31, 1991, for use as a guide but not policy in the planning of the SRA system. Some of the design techniques and concepts recommended for use in implementing the objectives of the SRA system are:

- **Signalization**—Including provision of new signals, interconnection of signals, and signal timing;

- **Intersection Improvements**—Consisting of provision of turn lanes, channelization, and restriction of certain movements;
- **Adding Lanes**—To achieve a desirable cross section for urban, suburban, and rural areas;
- **Bus Service Improvements**—Including bus stops and traffic signal preemption;

(Continued on Page 4)

2010 STRATEGIC REGIONAL ARTERIAL SYSTEM



# SRA—ONE PART OF OPERATION GREEN LIGHT

SRA is one part of a much larger project to address traffic congestion: Operation Green Light. Other activities are outlined below.

## Develop Major Transit/Highway Facilities

This element will contribute to freeway and transit projects in the 2010 Plan. Also, it will begin engineering studies and preserve right-of-way for future routes.

## Improve Other Key Arterial Roadways

If the SRA network is to carry regional traffic, the remaining roadways must play a more important role in carrying local traffic. This element will address improvements that will make them more efficient.

## Identify Strategic Transit Improvements

There are two goals for this element: (1) to make

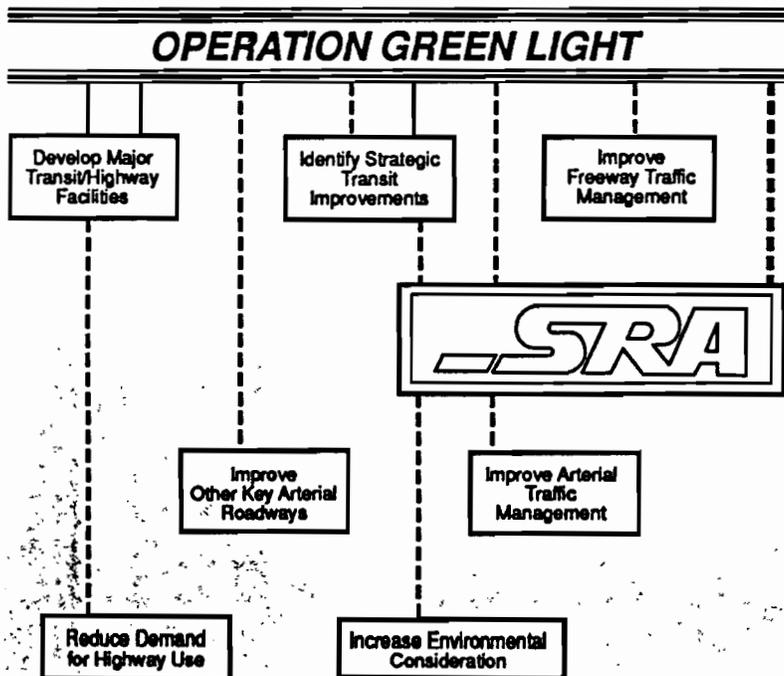
transit more convenient and swift and (2) to encourage more pedestrian and bicycle routes.

## Improve Freeway Traffic Management

Information about accidents and blocked lanes is available almost immediately. This element will develop ways to provide this information to other drivers and to emergency personnel more quickly. Other priorities are controlling the rate at which vehicles enter the freeway and continuing the installation of new toll collection equipment.

## Improve Arterial Traffic Management

Like freeways, better information systems for these routes will reduce congestion. Providing this information to individual drivers will require sophisticated systems. New equipment for private cars is being tested. Traffic signal networks are also very important. SRA will address these same topics.



## Reduce Demand for Highway Use

This element examines ways to reduce the number of vehicles on the road, particularly at rush hours. Increasing the number of people in each vehicle is the purpose of most strategies. Ride-sharing and mass transit offer ways that commuters can help. Businesses could offer preferred parking to people sharing rides and support the costs of sharing rides. This element also encourages shifting work schedules.

## Increase Environmental Consideration

Studies of ways to reduce noise and air pollution, to improve the appearance of roads, and to increase cooperation among local governments are all part of this element.

# STRATEGIC REGIONAL ARTERIALS AND THE ROADWAY HIERARCHY

As shown in the illustration below, the two most important factors that define the classification of a street are its access function and movement function. Street classifications range from the freeway, which has complete access control and carries mostly through traffic, to local streets with unrestricted access and no through traffic.

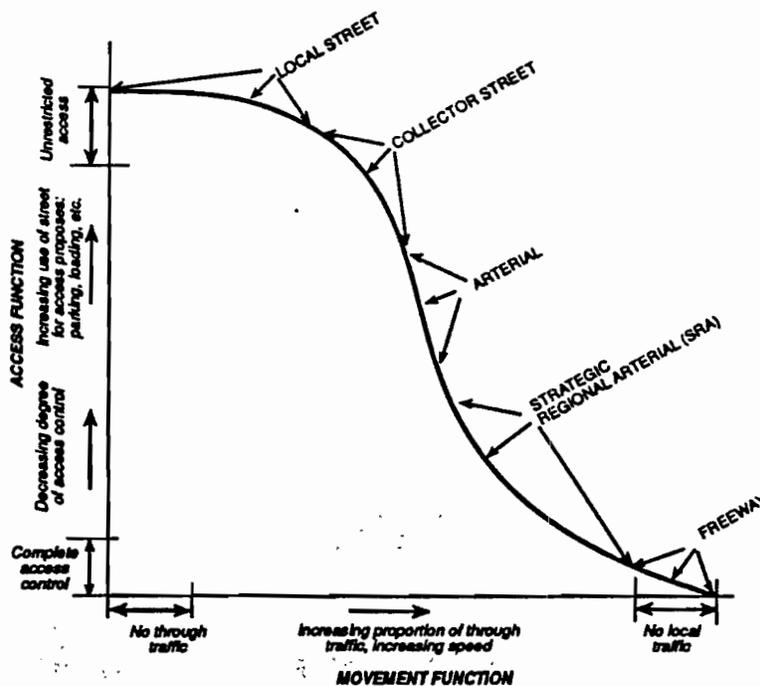
**Freeway**—The function of a freeway is to provide regional transportation for large volumes of traffic over long distances. There is no parking on a freeway. Access is controlled by on- and off-ramps that are generally spaced at least a mile apart. Distance or height often separate the freeway from the land around it. Expressway, superhighway, parkway, and tollway are all terms used to describe freeway-like roads.

**Strategic Regional Arterial (SRA)**—A second tier to the freeway system. These routes were selected because they carry, or are projected to carry, large volumes of long-distance traffic. As a group, they form a network that can carry such traffic to and from locations the freeway system cannot. They can also handle some of the overflow from the freeway system. Because of their strategic importance to regional travelers, IDOT and CATS are working to ensure they receive needed improvements. Recommendations concerning parking, access, traffic control, transit, lane additions, and intersection widening are examples of typical improvements.

**Arterial**—An arterial has two functions: (1) the primary purpose of an arterial road is to carry traffic within the region; and (2) it serves the homes and businesses along it. Parking is sometimes allowed, especially in older commercial centers. Other streets and the properties along it are connected directly. Usually, the roadway is not separate from the land around it.

**Collector**—The collector street directs traffic from local streets to arterials or local destinations such as shopping, schools, and office developments. The collector looks like the arterial, but it covers less distance, so it carries less regional traffic.

**Local**—A local street provides access to property. Moving traffic is a secondary function. Local streets route traffic onto a collector or arterial street as quickly as possible. Parking is usually allowed.



MOVEMENT ACCESS FUNCTION OF ROADWAY TYPE

Reference: Institute of Traffic Engineers, *System Considerations for Urban Arterial Streets*, October 1969. (Modified by CH2M HILL)

## THE SRA PROJECT (Continued from Page 1)

- Access Management—To reduce conflicts and improve safety;
- Median Control—To provide for left-turning vehicles, direct turning movements to desired locations, and reduce centerline conflicts;
- Structural Clearance Improvements—Both vertical and horizontal clearances;
- Traffic Operational Improvements—Such as signing and pavement markings; and
- Drainage Problem Correction—Whenever required.

The design concepts also address criteria and conditions from removal of curb parking and implementation of high-occupancy vehicle (HOV) lanes.

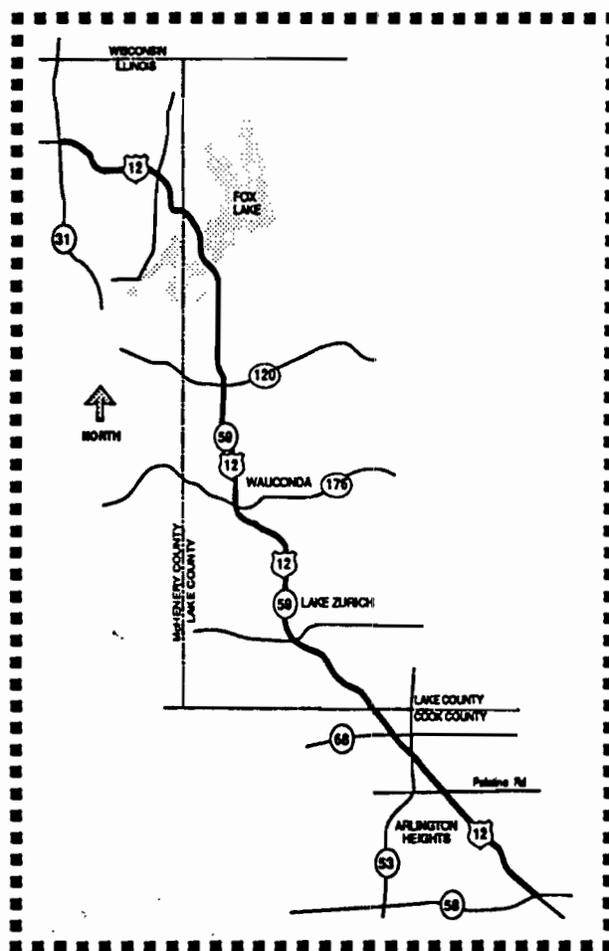
### Studies of SRA Routes

The concepts and standard developed thus far and modified or enlarged upon as work progresses will be applied to the entire 1,340 miles of SRA routes in five consecutive studies. This study, being accomplished by the consulting firm of CH2M HILL, Inc., is concerned with a total of 305 miles of SRA routes in 12 corridors. The routes selected for this phase of the SRA study process reflect a variety of area types—from rural U.S. 14 in McHenry County to suburban settings such as Barrington Road in Cook County or County Farm Road in Du Page County, and urban Pershing Road and Archer Avenue in the City of Chicago. The resultant plans for each of these routes will include both short- and long-term improvements. Studies will be made of additional sets of roadways each year beginning in 1992 until the entire SRA system has been completed.

A second part of this project consists of identifying and evaluating performance parameters to be used for increasing the effectiveness of various improvements along the SRA routes. This work will be carried on concurrently with the individual SRA corridor analyses.

### The U.S. 12 Corridor

The map to the right shows the extent of the U.S. 12 SRA Corridor. The U.S. 12 Corridor extends from Golf Road to Illinois Route 31, passing through Cook, Lake, and McHenry Counties, for a total length of approximately 38 miles. This Advisory Panel is concerned with the portion of the corridor from Lake-Cook Road to Illinois Route 31 in Lake and McHenry Counties.

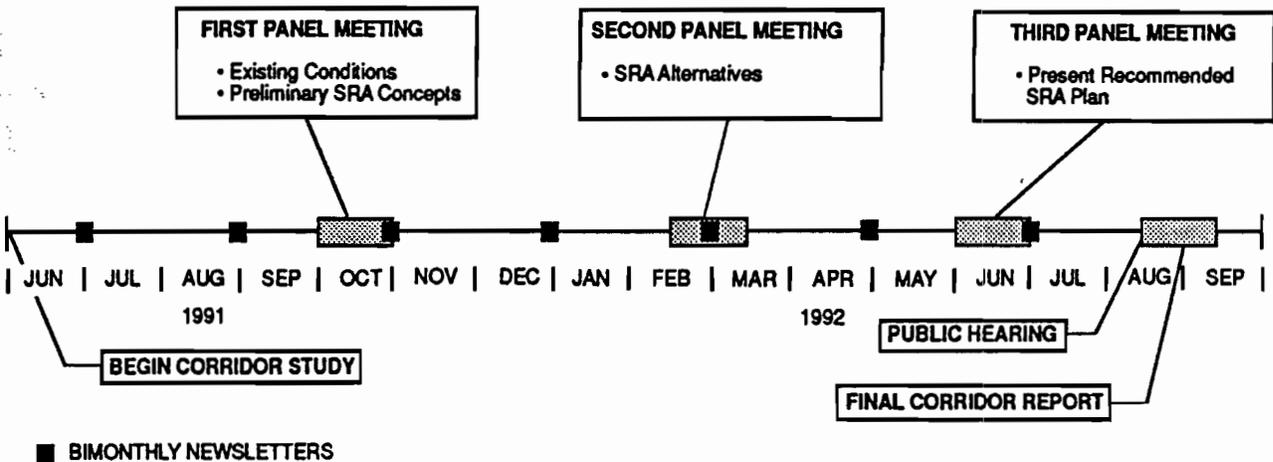


---

# STUDY PROCESS AND SCHEDULE

---

## CORRIDOR 2—U.S. 12 FROM GOLF ROAD TO ILLINOIS ROUTE 31



---

## ROLE OF THE ADVISORY PANEL

---

### Who should be on the Panel?

The panel is composed of government representatives of jurisdictions along this corridor. The panel may also wish to add representatives from business and community organizations along the route.

### What are the duties of the Panel?

The panel is responsible for reviewing and commenting on the study recommendations and conclusions. Panel members also assist the consultant team by identifying and assembling specific data and information about land use, transportation, and development within their respective jurisdiction. During July and August, the Chicago Area Transportation Study (CATS) will be contacting the advisory panels on behalf of the consultant team to gather corridor-specific data.

### How often will the Panel meet?

There are three planned Panel meetings involving the consultant, the Illinois Department of Transportation, and CATS. The Advisory Panel may also elect to meet at other times. It would be the responsibility of the coordinator of the Panel to inform members of topics and arrange the program.

### Will the consultants be available to meet separately with representatives of all the communities along the route?

No. The Advisory Panels are the only formal community contact included within the contract for consultant services. However, the consultant team does plan to meet informally with community officials, as needed, to gather information and identify local concerns.

# SPOTLIGHT ON THE SPOTLIGHT

## What to Expect in Future Editions...

The SRA Spotlight will be issued about every 2 months during the course of the study. Future issues will be designed to keep you abreast of study progress and answer your questions. Some features of future Spotlights will be:

- Reports on project developments such as panel meetings, public hearings, and other forums;
- A regular section presenting answers to questions raised at corridor meetings for this corridor, or in other corridors if the information would be universally useful;
- A status report to keep you up-to-date on study findings, and recommendations; and
- Announcements of forthcoming activities that will involve panel members and others in the corridor.

There is also a form on the facing page that you are encouraged to use to give us your views and ideas regarding future issues of the Spotlight.

.....  
**SRA SPOTLIGHT**  
.....

**Publisher:**  
The Illinois Department of Transportation

**Editor:**  
**CHMILL**

**For:**  
The Strategic Regional Arterials Plan

### Advisory Panel

**Coordinator:**  
Mark Schmidt  
Lake County Division of Transportation

**Panel Members:**

Deer Park  
Fox Lake  
Hawthorn Woods  
Kildeer  
Lake Zurich  
Spring Grove  
Wauconda

**For More Information, Please Contact:**

Mark Schmidt  
Planning & Program  
Lake County Division of Transportation  
P.O. Box 220, Winchester Road  
Libertyville, Illinois 60048



# SRA SPOTLIGHT

## U.S. 41 CORRIDOR ADVISORY PANEL

### SRA ROUTE TYPES

The extent of the Strategic Regional Arterial (SRA) network was described in Newsletter Number One. It consists of 1340 miles of existing roads in Northeastern Illinois, encompassing 146 route segments in the six-county area. Within this network there are significant differences in the roadway environment which determine how various types of routes may function in the system. Three different types of SRA routes have been designated, corresponding to three different types of roadway environment

- Urban Routes
- Suburban Routes
- Rural Routes

The designation of route types within the overall SRA system reflects the density of development within the different portions of the region. The projected density of households for the year 2010 was used as the criterion for defining density of development for the route types. Densities which correspond to each of these route types are:

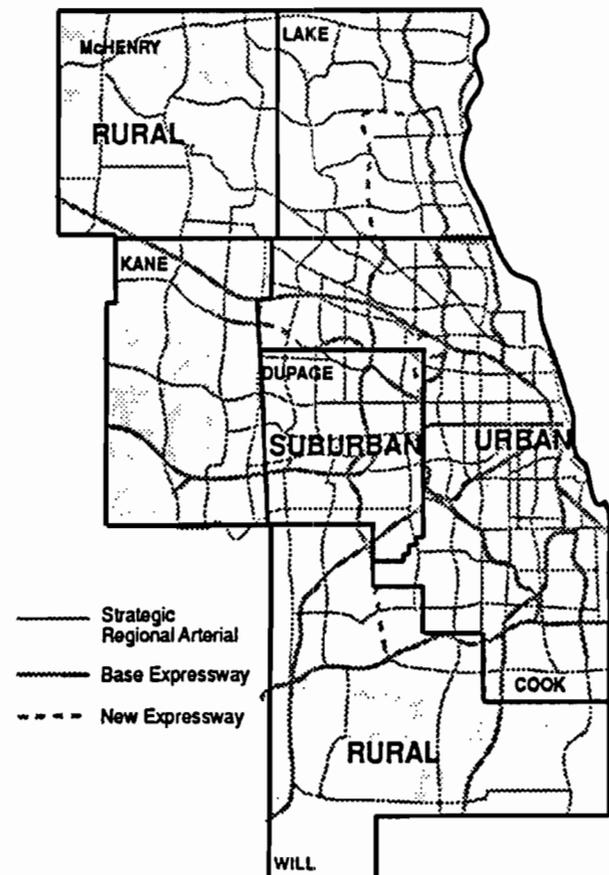
- Urban routes: Densities over 5.0 households per acre by 2010.
- Suburban routes: Densities between 0.5 and 5.0 households per acre by 2010.
- Rural routes: Densities less than 0.5 households per acre by 2010.

The areas for each route type are shown in the accompanying map. Urban routes are located in the City of Chicago and adjacent portions of more densely

developed suburbs such as Oak Park. Suburban route designations encompass most of suburban Cook and Lake Counties, all of DuPage County, and the more developed portions of McHenry, Kane and Will Counties. Within each of the three areas, continuity of route type is maintained based upon the overall density of 2010 development.

The *Design Concept Report*, prepared in 1990 and endorsed by the Policy Committee of the Chicago Area

#### 2010 STRATEGIC REGIONAL ARTERIAL SYSTEM



# ROADWAY FEATURES RELATED TO TYPE OF FACILITY

Transportation Study (CATS) earlier this year, set out desirable characteristics for each type of SRA route in year 2010.

## Urban Routes

The desirable cross-section for SRA routes in urban areas is shown below. It consists of two traffic lanes in each direction, preferably with a median to separate the traffic flows and provide protection for turning vehicles. An additional curb lane may be provided in some circumstances for use by buses or other high-occupancy vehicles (HOV's). Curb parking is not recommended; it should be replaced in offstreet facilities wherever possible.

All major intersections on urban SRA routes would be signalized and interconnected into signal networks or signal systems with pedestrian actuation where needed. Intersections would also provide left- and right-turn lanes where right-of-way is available.

Transit service enhancements would be considered on urban SRA routes which accommodate bus routes. Actions would also be taken to manage access thereby improving traffic operations and enhancing safety.

## Suburban Routes

The desirable cross-section for SRA routes in suburban areas is shown below. Recommended features are three through lanes in each direction, a raised median and turn lanes at intersections. Capacity increasing measures also include signal synchronization, transit and pedestrian amenities, and policies related to access and parking.

Major intersections and interchanges with other SRA routes are of prime concern in the suburban areas (and in rural areas, discussed next). Left- and right-turn lanes would be provided at all major signalized intersections. At many suburban intersections, turning movements are very high and may warrant double left turn lanes. A grade-separated interchange would be considered, at intersections between two SRA routes, if right-of-way is available and if conditions warrant.

Access management is another key consideration

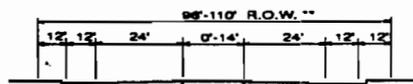
in suburban areas. It is recommended that access to abutting properties be limited to right-in, right-out traffic movements. In suburban areas where there are numerous curb cut access points to properties, these may be combined into a single point.

## Rural Routes

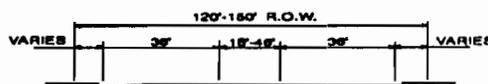
Desirable cross-sections for SRA routes in rural areas are shown below for facilities with and without frontage roads. The rural SRA route would consist of two travel lanes in each direction with left-turn lanes at all intersections and a wide median. As with suburban routes, all major intersection would be signalized and a grade-separated interchange would be considered wherever two SRA routes intersect.

Frontage roads would be considered on rural SRA routes if there are a number of closely spaced drive ways and/or groupings of potentially dangerous intersections. Particular attention would be paid to the treatment of frontage road intersections at cross streets that access the SRA systems.

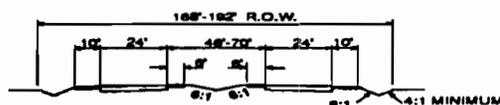
### CROSS SECTIONS



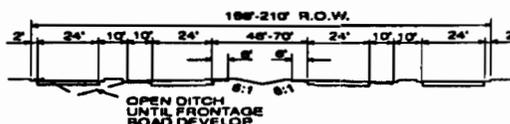
URBAN



SUBURBAN



RURAL



RURAL WITH FRONTAGE ROADS

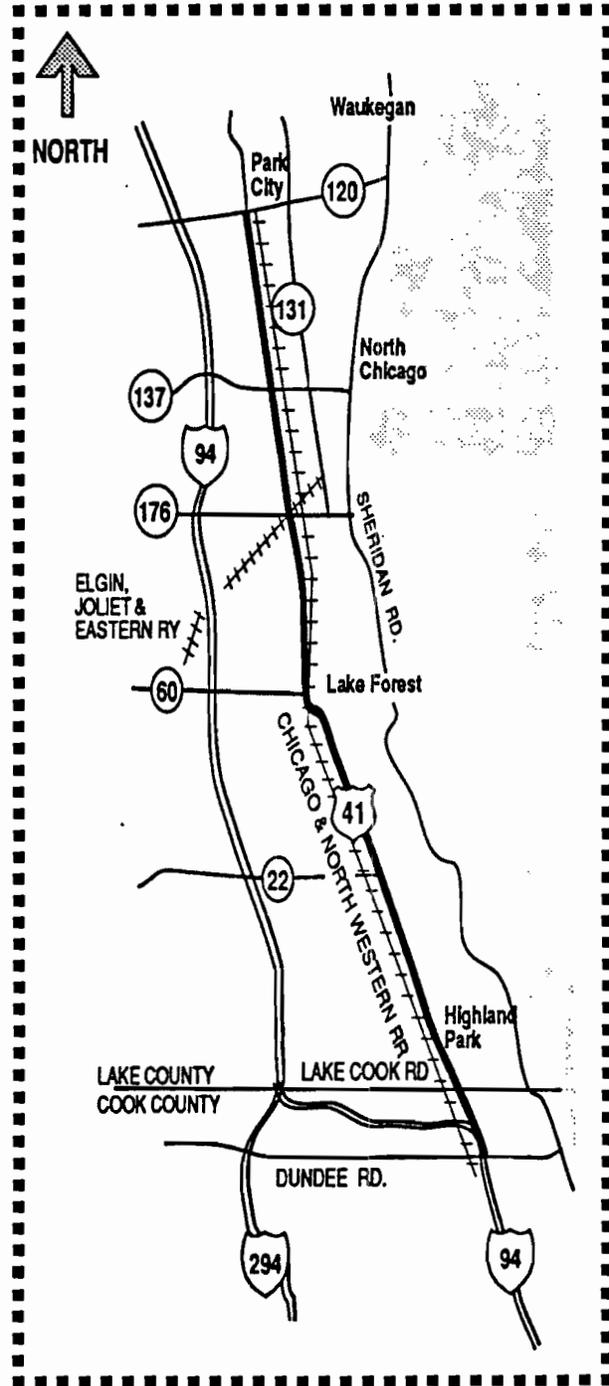
# ROUTE TYPE CONSIDERATION IN THE U.S. 41 CORRIDOR

## The U.S. 41 Corridor

The U.S. 41 corridor is designated as a suburban SRA from the south junction of I-94 to Illinois Route 120. The ultimate 2010 desirable characteristics for a suburban SRA route could include three lanes in each direction, turn lanes at intersections, and a raised center median. The desired right-of-way could range from 120 to 150 feet.

The existing cross section of U.S. 41 between Illinois Route 120 and Clavey Road is two lanes in each direction, 10-foot paved shoulders, and center medians with and without barriers. Right-of-way varies from 100 to 210 feet. For the segment of U.S. 41 between Clavey Road and the south junction with I-94, the existing cross section is three lanes in each direction, 10-foot paved shoulders, center median with a traffic barrier, and a 300-foot right-of-way.

Future considerations could include providing additional grade separations, consolidating multiple access points, developing alternative access off U.S. 41, and improving traffic control, particularly at intersections in close proximity to the Chicago and North Western railroad.



---

# YOU CAN HELP

---

There are a number of ways that you, as a panelist for this SRA route segment, can assist in producing the best and most acceptable plan for this corridor.

- A call has gone out earlier for copies of background data, reports, and other information pertaining to the SRA route. It is extremely important that the project engineers and planners have access to previous as well as ongoing work. If you have not yet responded please provide copies to the panel coordinator as soon as possible. Also, if there are any additional areas of concern that you feel should be considered in this process, your panel coordinator should be made aware of this information.

- Please plan to attend panel meetings. These are important sessions that can set the tone for the remainder of the planning study.

.....

## SRA SPOTLIGHT

.....

**Publisher:**

The Illinois Department of Transportation

**Editor:**

**CHM HILL**

**For:**

The Strategic Regional Arterials Plan

**Advisory Panel**

**Coordinator:**

Mark Schmidt

Lake County Division of Transportation

**Panel Members:**

Highland Park - Daniel M. Pierce

Lake Bluff - N. David Graf

Lake Forest - Charles F. Clarke, Jr.

North Chicago - Bobby E. Thompson

Northbrook - Richard Falcone

Park City - Robert Allen

Waukegan - Haig Paravonian

Cook County - Glenn W. Frederichs

Lake County - Martin G. Buehler

---

---

## LET US HEAR FROM YOU

---

---

Do You Have Questions or Comments? \_\_\_\_\_

Is Your Address Correct? \_\_\_\_\_

---

---

Please Send Questions, Comments, or Address Changes to:

**Mark Schmidt  
Planning & Program  
Lake County Division of Transportation  
P.O. Box 220, Winchester Road  
Libertyville, Illinois 60048**

# SRA SPOTLIGHT

## U.S. 12 CORRIDOR ADVISORY PANEL

### SRA ROUTE TYPES

The extent of the Strategic Regional Arterial (SRA) network was described in Newsletter Number One. It consists of 1340 miles of existing roads in Northeastern Illinois, encompassing 146 route segments in the six-county area. Within this network there are significant differences in the roadway environment which determine how various types of routes may function in the system. Three different types of SRA routes have been designated, corresponding to three different types of roadway environment

- Urban Routes
- Suburban Routes
- Rural Routes

The designation of route types within the overall SRA system reflects the density of development within the different portions of the region. The projected density of households for the year 2010 was used as the criterion for defining density of development for the route types. Densities which correspond to each of these route types are:

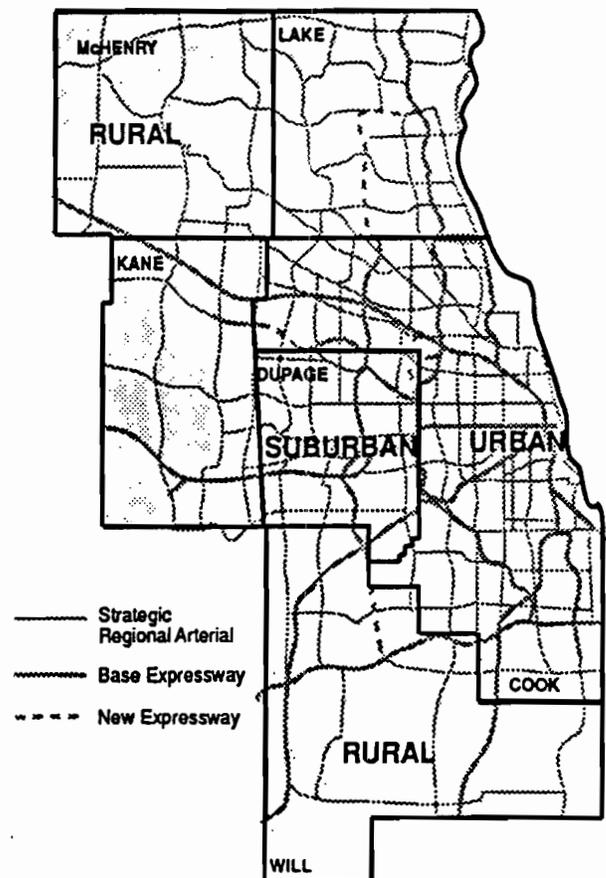
- Urban routes: Densities over 5.0 households per acre by 2010.
- Suburban routes: Densities between 0.5 and 5.0 households per acre by 2010.
- Rural routes: Densities less than 0.5 households per acre by 2010.

The areas for each route type are shown in the accompanying map. Urban routes are located in the City of Chicago and adjacent portions of more densely

developed suburbs such as Oak Park. Suburban route designations encompass most of suburban Cook and Lake Counties, all of DuPage County, and the more developed portions of McHenry, Kane and Will Counties. Within each of the three areas, continuity of route type is maintained based upon the overall density of 2010 development.

The *Design Concept Report*, prepared in 1990 and endorsed by the Policy Committee of the Chicago Area

2010 STRATEGIC REGIONAL ARTERIAL SYSTEM



# ROADWAY FEATURES RELATED TO TYPE OF FACILITY

Transportation Study (CATS) earlier this year, set out desirable characteristics for each type of SRA route in year 2010.

## Urban Routes

The desirable cross-section for SRA routes in urban areas is shown below. It consists of two traffic lanes in each direction, preferably with a median to separate the traffic flows and provide protection for turning vehicles. An additional curb lane may be provided in some circumstances for use by buses or other high-occupancy vehicles (HOV's). Curb parking is not recommended; it should be replaced in offstreet facilities wherever possible.

All major intersections on urban SRA routes would be signalized and interconnected into signal networks or signal systems with pedestrian actuation where needed. Intersections would also provide left- and right-turn lanes where right-of-way is available.

Transit service enhancements would be considered on urban SRA routes which accommodate bus routes. Actions would also be taken to manage access thereby improving traffic operations and enhancing safety.

## Suburban Routes

The desirable cross-section for SRA routes in suburban areas is shown below. Recommended features are three through lanes in each direction, a raised median and turn lanes at intersections. Capacity increasing measures also include signal synchronization, transit and pedestrian amenities, and policies related to access and parking.

Major intersections and interchanges with other SRA routes are of prime concern in the suburban areas (and in rural areas, discussed next). Left- and right-turn lanes would be provided at all major signalized intersections. At many suburban intersections, turning movements are very high and may warrant double left turn lanes. A grade-separated interchange would be considered, at intersections between two SRA routes, if right-of-way is available and if conditions warrant.

Access management is another key consideration

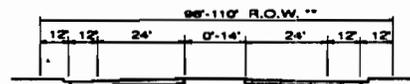
in suburban areas. It is recommended that access to abutting properties be limited to right-in, right-out traffic movements. In suburban areas where there are numerous curb cut access points to properties, these may be combined into a single point.

## Rural Routes

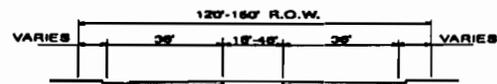
Desirable cross-sections for SRA routes in rural areas are shown below for facilities with and without frontage roads. The rural SRA route would consist of two travel lanes in each direction with left-turn lanes at all intersections and a wide median. As with suburban routes, all major intersection would be signalized and a grade-separated interchange would be considered wherever two SRA routes intersect.

Frontage roads would be considered on rural SRA routes if there are a number of closely spaced driveways and/or groupings of potentially dangerous intersections. Particular attention would be paid to the treatment of frontage road intersections at cross streets that access the SRA systems.

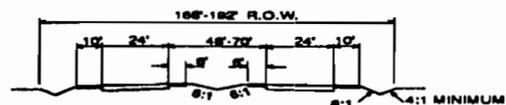
### CROSS SECTIONS



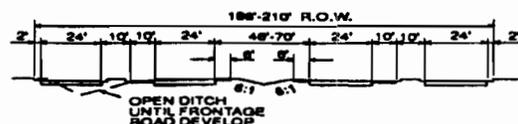
URBAN



SUBURBAN



RURAL



RURAL WITH FRONTAGE ROADS

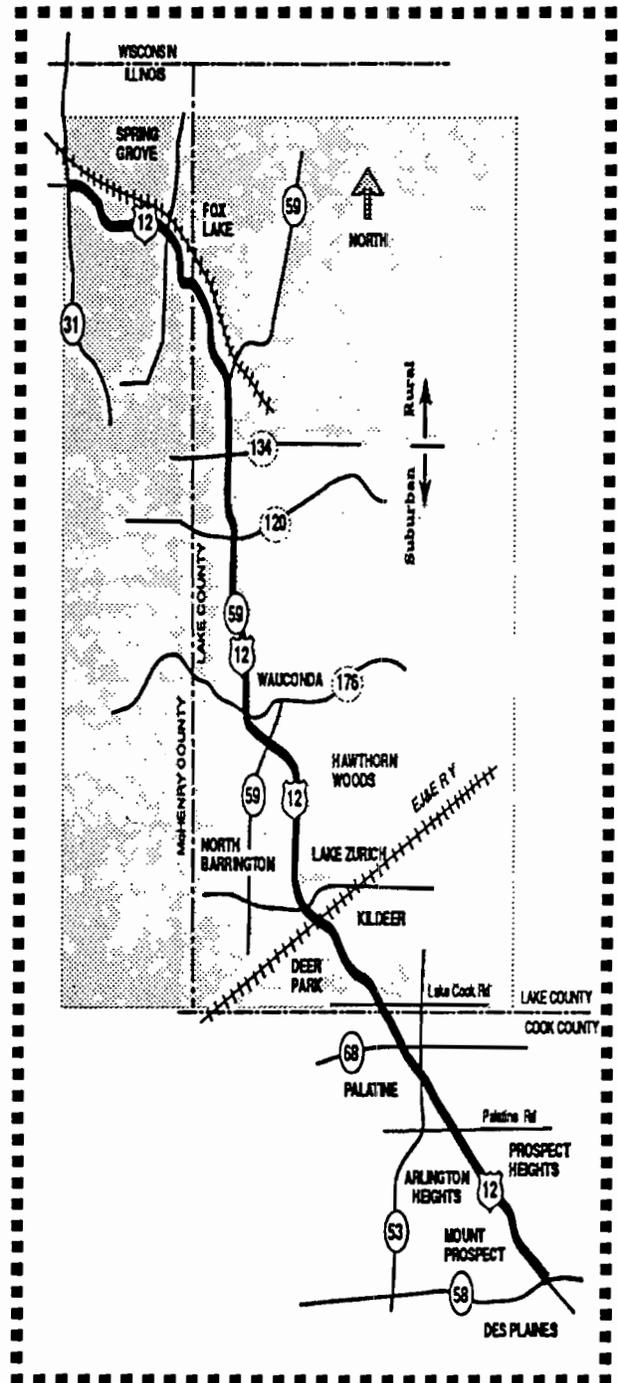
# ROUTE TYPE CONSIDERATION IN THE U.S. 12 CORRIDOR

## The U.S. 12 Corridor

U.S. 12 has been designated an SRA corridor from Golf Road (Illinois Route 58) in Cook County, north to Illinois Route 31 in McHenry County. This panel is concerned with U.S. 12 from the Lake-Cook county line to Illinois Route 31. The accompanying corridor map depicts the study area.

The U.S. 12 SRA route has been classified as a suburban corridor from Lake-Cook Road to Illinois Route 134. North of Illinois Route 134 the SRA classification of U.S.12 changes to rural to the northern terminus (Illinois Route 31). The ultimate 2010 desirable characteristics of a suburban classification could include 120 to 150 feet of right-of-way, six continuous through lanes (three in each direction of travel), and a raised median. In addition, sidewalks and bus turnouts may be considered. The ultimate 2010 desirable characteristics of a rural classification could include 168 to 210 feet of right-of-way. This width could accommodate a four-lane section (two lanes in each direction of travel), with provision for future expansion or the addition of frontage roads for local land-use access. A depressed/open median could be considered along the rural segments.

Several locations along this segment of U.S. 12 are considered to offer special circumstances. These include the segment of U.S. 12 passing through Fox Lake, where existing right-of-way is relatively narrow and buildings are situated close to the roadway. There are also a number of wetlands and a conservation district north of Fox Lake adjacent to U.S. 12 that will require special consideration.



---

# YOU CAN HELP

---

There are a number of ways that you, as a panelist for this SRA route segment, can assist in producing the best and most acceptable plan for this corridor.

- A call has gone out earlier for copies of background data, reports, and other information pertaining to the SRA route. It is extremely important that the project engineers and planners have access to previous as well as ongoing work. If you have not yet responded please provide copies to the panel coordinator as soon as possible. Also, if there are any additional areas of concern that you feel should be considered in this process, your panel coordinator should be made aware of this information.

- Please plan to attend panel meetings. These are important sessions that can set the tone for the remainder of the planning study.

.....  
**SRA SPOTLIGHT**  
.....

**Publisher:**

The Illinois Department of Transportation

**Editor:**

**CHM HILL**

**For:**

The Strategic Regional Arterials Plan

**Advisory Panel**

**Coordinator:**

Mark Schmidt  
Lake County Division of Transportation

**Panel Members:**

Deer Park - James M. Peterson  
Fox Lake - Francis A. Meier  
Hawthorn Woods - Glen H. Grieshaber  
Kildeer - George L. Welch  
Lakemoor - Charles E. Godt  
Lake Zurich - James W. Kay  
North Barrington - Walter R. Clarke, Jr.  
Spring Grove - John Toler  
Wauconda - James P. Keagle, Sr.  
Lake County - Martin G. Buehler  
McHenry County - James R. Rakow



---

# SRA SPOTLIGHT

## U.S. 12 CORRIDOR ADVISORY PANEL

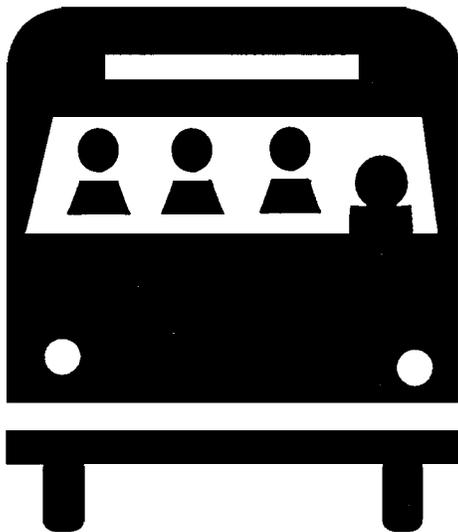
---



---

## PUBLIC TRANSIT

---



The success of today's transportation system and the viability of its future depend on a "balanced" system, one that provides a mixture of modes and optimizes mobility in terms of convenience, comfort, safety, and economy. A key element of this balanced system has long been to give preferential treatment to public transit and other high-occupancy vehicles (HOV).

The Strategic Regional Arterial (SRA) system is intended to accomplish certain specific objectives within the overall transportation system, one of which is to enhance public transportation and personal mobility. This may be accomplished by:

- Improving access to rail transit stations
- Improving operating conditions for buses and other vehicles
- Identifying opportunities for future transit facilities
- Maintaining pedestrian accessibility

These strategies are being investigated for application in plans for each of the SRA routes under study.

### Improved Transit Station Accessibility

Existing transit stations along SRA routes will be evaluated for potential improvements to increase accessibility from the SRA. Increased accessibility may motivate more people to make regional trips utilizing transit, thereby reducing the number of vehicles on the SRA. Accessibility could be improved by one or more of the following techniques.

- **Actuated Traffic Signals**—Transit station usage is extremely intensive during peak periods. Incorporating traffic signals with phasing and timing that responds to varying daily traffic levels will make transit stations more accessible and reduce delays. If new traffic signals are proposed at transit stations, they should meet the established traffic warrants and spacing of signals criteria.
- **Turn Lanes**—To maximize through traffic movements for vehicles not wishing to access transit stations, channelized right- and left-turn lanes could be constructed for vehicles turning into transit stations. If demand is high enough, dual left- and/or right-turn lanes might be constructed. Appropriate storage bays for turning vehicles must also be implemented.
- **Parking Improvements**—Parking lot expansion for commuters will be investigated. Preferential parking stalls nearest to transit stations could be designated for HOV. Secure bicycle parking also should be provided at most suburban transit stations.
- **Pedestrian Grade Separations**—If substantial parking for a transit station is located on the opposite side of a SRA, grade separation for the pedestrian movement could be considered. This would tend to reduce delays on the SRA caused by at-grade pedestrian flow, and would also improve safety and convenience for the pedestrians.

---

## Improved Operating Conditions for Buses

A number of transit enhancements will be considered both to relieve traffic congestion and improve operating conditions for buses.

### Bus Service on Rural SRAs

Bus services operating on rural SRAs should, if possible, be limited to express service. The buses should have signal preemption capability that can be deployed when they are running behind schedule. Because of the high-speed characteristics of these facilities, flag stops are not considered appropriate. Wherever possible, bus stops on these routes should be planned as public-private cooperative ventures in conjunction with activity centers. These off-the-road sheltered stops would also serve connecting routes and incorporate park-and-ride facilities. They would be located at 2- to 5-mile intervals. Bus stops should be located on the actual SRA routes when there are no opportunities for off-road facilities, and/or to serve riders transferring from connecting services.

### Bus Service on Suburban SRAs

Similar to bus services for rural SRAs, bus services on suburban SRAs should be express buses. Where possible or feasible express bus service should be equipped with priority signal preemption capability that can be deployed when they are running behind schedule. Bus stop locations should occur every one-half to 1 mile. Variable factors to consider in locating the stops are:

- Whether there are intersecting bus routes with a corresponding potential for transferring riders; and
- Whether there are significant residential, commercial/retail, or office developments to be served along the route.

The stops would be designed as turnouts and would accommodate connecting services. Walkways to stops of intersecting services would facilitate transfers and promote safety. Near-side and far-side bus stop configurations would be planned to minimize distance between connecting lines.

### Bus Service on Urban SRAs

On urban SRA routes that accommodate bus service, a number of transit service enhancements will be reviewed to determine their potential for relieving traffic congestion. One basic technique would be to remove parking from the bus travel lanes, and strictly enforce parking restrictions. Signal system modification represents another potential area for enhancement.

Bus stop turnouts are not considered practical on urban SRAs. On a route-specific basis, however, both the locations and spacing of bus stops will be reviewed. Major objectives would be to eliminate stops in excess of one per block, and to eliminate conflicts with right turns. Where the blocks are short, as in the central area, stops could be located at every second block.

### Exclusive Bus Lanes

Another strategy to improve travel times is to establish exclusive lanes for buses and HOV during the morning and evening peak travel periods. This approach would be reserved for SRAs with at least three traffic lanes in each direction (see Figure 1, which illustrates the "diamond lane" concept). A companion measure essential to the effectiveness of exclusive lanes is minimizing access points to the roadway by eliminating curb cuts wherever possible.

Figure 2 illustrates median bus lane treatment on an urban SRA route. If this treatment is adopted, automobile left turns from the urban SRA route should be permitted only at other SRA routes.

Lanes on urban SRA routes could also be dedicated to buses that travel in the reverse direction from the normal traffic flow. Figure 3 gives an example of a typical transit contra-flow lane. Contra-flow lanes have been used in downtown Chicago, and have been very effective in reducing both bus travel times and bus operating expenses. However, because of accident potential, transit contra-flow lanes are generally only recommended when additional lanes cannot be added easily because of space limitations and where reserve capacity is available in the non-peak direction.

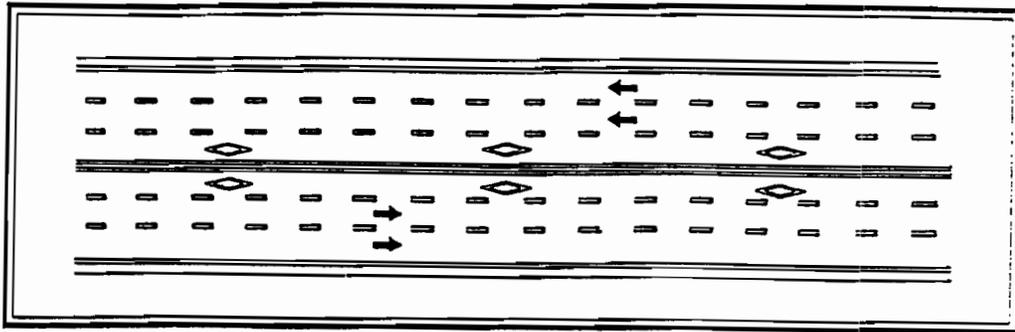


Figure 1 "Diamond Lanes"

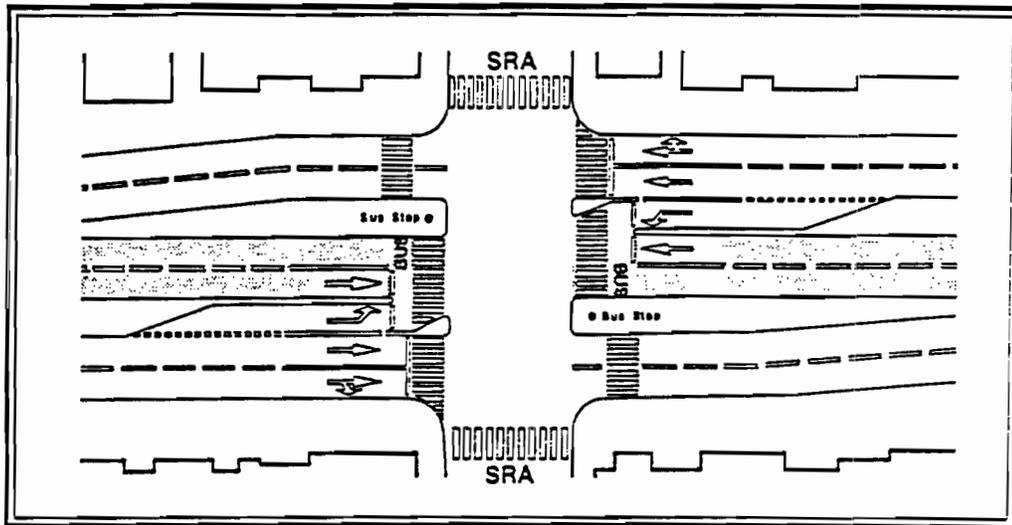


Figure 2 Center Bus Lane Treatment - Urban SRA

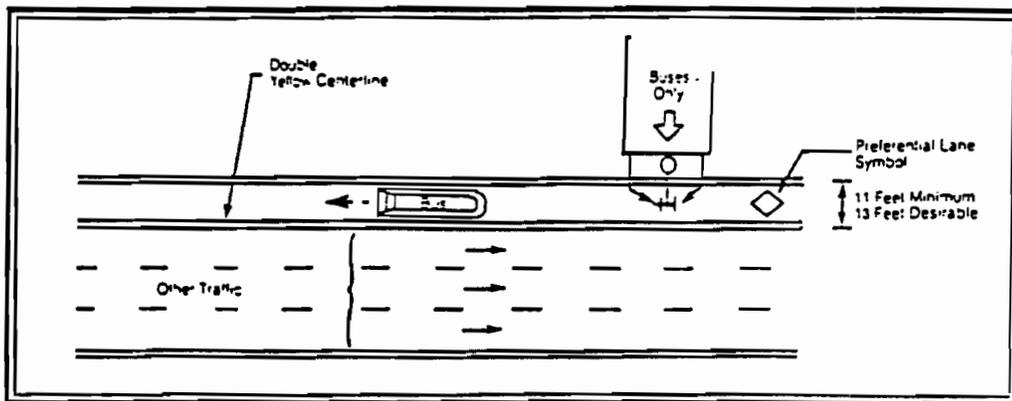


Figure 3 Typical Transit Contra-Flow Lane

## Identifying Opportunities for Future Transit Facilities

Plans for SRA routes will consider opportunities to incorporate future transit and associated facilities such as:

- Busways
- High-Occupancy Vehicle (HOV) Lanes
- Ridesharing Facilities

Furthermore, SRA routes will consider incorporating future light - rail systems or circulator and shuttle systems where future plans already exist.

## Maintaining Pedestrian Accessibility

Safe movement and accessibility are key issues for bicycles and pedestrians. The urban SRA corridors are likely to experience the greatest concentration of pedestrians and cyclists. The density of developments coupled with shorter trip-making encourage these travel modes. Additionally, the urban SRA routes experience heavy traffic volumes. In these urban areas, close parallel routes are usually present and continuous. These parallel facilities should be identified as bicycle routes so that the SRA routes can focus on their primary responsibility—carrying regional traffic. The design of most urban SRA routes already includes sidewalks for pedestrians and should continue to do so under maximum design. Handicapped access ramps for pedestrians also will be considered at intersections and curb cut locations.

On rural and suburban SRA routes, more options are available for handling pedestrian and bicycle access. For example, while right-of-way availability is still a critical issue, dense development immediately adjacent to the roadway may not be as common an occurrence as in urban areas. In certain cases provisions for bicycles and pedestrians may be accommodated within the SRA right-of-way itself. In these situations, alternative parallel routes may not always be available. The choice of how to provide access within the SRA corridor will be based on each unique situation. Where an existing bicycle and pedestrian facility already exists, the goal is to have a continuous system of bicycles and pedestrian facilities.

## U.S. 12 Project Status

To date, about 30 percent of the study of U.S. 12 is complete. In October, IDOT and the consultant team held the first Advisory Panel Meetings. At these meetings, the existing conditions of the U.S. 12 corridor were reviewed with panel members. The second Advisory Panel Meeting is scheduled for the spring of 1992. Advisory Panel members will be contacted in the near future to set the date, time, and location. At this second meeting, the panel will discuss long-range alternatives for improvements to the U.S. 12 corridor. The third Advisory Panel Meeting is scheduled to take place in the summer of 1992, and a Public Hearing is scheduled tentatively for the fall of 1992.

### SRA SPOTLIGHT

**Publisher:**

The Illinois Department of Transportation

**Editor:**

**CIMHILL**

**For:**

The Strategic Regional Arterials Plan  
Advisory Panel

**Coordinator:**

Mark Schmidt  
Lake County Division of Transportation

**Panel Members:**

Deer Park - James M. Peterson, President  
Fox Lake - Francis A. Meier, President  
Hawthorn Woods - Glen H. Grieshaber, President  
Kildeer - George L. Welch, President  
Lakemoor - Charles E. Godt, President  
Lake Zurich - James W. Kay, Mayor  
North Barrington - Walter R. Clarke, Jr., President  
Spring Grove - John Toler, Mayor  
Wauconda - James P. Keagle, Sr., Mayor  
Lake County - Martin G. Buehler, Director of Transportation  
McHenry County - James R. Rakow, Superintendent of Highways

---

---

# LET US HEAR FROM YOU

---

---

Do You Have Questions or Comments? \_\_\_\_\_

Is Your Address Correct? \_\_\_\_\_

Please Send Questions, Comments, or Address Changes to:

**Mark Schmidt  
Planning & Program  
Lake County Division of Transportation  
600 Winchester Road  
Libertyville, Illinois 60048**

---

# SRA SPOTLIGHT

## U.S. 12 CORRIDOR ADVISORY PANEL

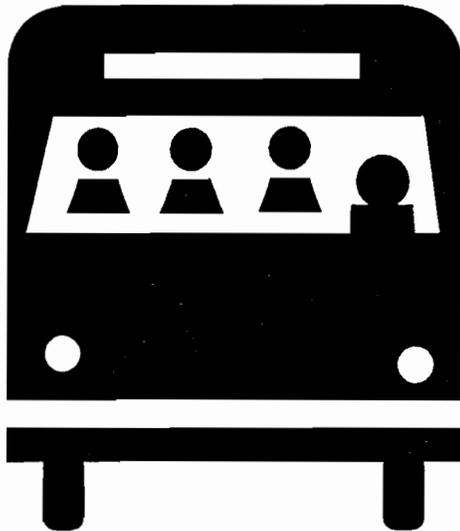
---



---

## PUBLIC TRANSIT

---



The success of today's transportation system and the viability of its future depend on a "balanced" system, one that provides a mixture of modes and optimizes mobility in terms of convenience, comfort, safety, and economy. A key element of this balanced system has long been to give preferential treatment to public transit and other high-occupancy vehicles (HOV).

The Strategic Regional Arterial (SRA) system is intended to accomplish certain specific objectives within the overall transportation system, one of which is to enhance public transportation and personal mobility. This may be accomplished by:

- Improving access to rail transit stations
- Improving operating conditions for buses and other vehicles
- Identifying opportunities for future transit facilities
- Maintaining pedestrian accessibility

These strategies are being investigated for application in plans for each of the SRA routes under study.

### Improved Transit Station Accessibility

Existing transit stations along SRA routes will be evaluated for potential improvements to increase accessibility from the SRA. Increased accessibility may motivate more people to make regional trips utilizing transit, thereby reducing the number of vehicles on the SRA. Accessibility could be improved by one or more of the following techniques.

- **Actuated Traffic Signals**—Transit station usage is extremely intensive during peak periods. Incorporating traffic signals with phasing and timing that responds to varying daily traffic levels will make transit stations more accessible and reduce delays. If new traffic signals are proposed at transit stations, they should meet the established traffic warrants and spacing of signals criteria.
- **Turn Lanes**—To maximize through traffic movements for vehicles not wishing to access transit stations, channelized right- and left-turn lanes could be constructed for vehicles turning into transit stations. If demand is high enough, dual left- and/or right-turn lanes might be constructed. Appropriate storage bays for turning vehicles must also be implemented.
- **Parking Improvements**—Parking lot expansion for commuters will be investigated. Preferential parking stalls nearest to transit stations could be designated for HOV. Secure bicycle parking also should be provided at most suburban transit stations.
- **Pedestrian Grade Separations**—If substantial parking for a transit station is located on the opposite side of a SRA, grade separation for the pedestrian movement could be considered. This would tend to reduce delays on the SRA caused by at-grade pedestrian flow, and would also improve safety and convenience for the pedestrians.

---

## Improved Operating Conditions for Buses

A number of transit enhancements will be considered both to relieve traffic congestion and improve operating conditions for buses.

### Bus Service on Rural SRAs

Bus services operating on rural SRAs should, if possible, be limited to express service. The buses should have signal preemption capability that can be deployed when they are running behind schedule. Because of the high-speed characteristics of these facilities, flag stops are not considered appropriate. Wherever possible, bus stops on these routes should be planned as public-private cooperative ventures in conjunction with activity centers. These off-the-road sheltered stops would also serve connecting routes and incorporate park-and-ride facilities. They would be located at 2- to 5-mile intervals. Bus stops should be located on the actual SRA routes when there are no opportunities for off-road facilities, and/or to serve riders transferring from connecting services.

### Bus Service on Suburban SRAs

Similar to bus services for rural SRAs, bus services on suburban SRAs should be express buses. Where possible or feasible express bus service should be equipped with priority signal preemption capability that can be deployed when they are running behind schedule. Bus stop locations should occur every one-half to 1 mile. Variable factors to consider in locating the stops are:

- Whether there are intersecting bus routes with a corresponding potential for transferring riders; and
- Whether there are significant residential, commercial/retail, or office developments to be served along the route.

The stops would be designed as turnouts and would accommodate connecting services. Walkways to stops of intersecting services would facilitate transfers and promote safety. Near-side and far-side bus stop configurations would be planned to minimize distance between connecting lines.

### Bus Service on Urban SRAs

On urban SRA routes that accommodate bus service, a number of transit service enhancements will be reviewed to determine their potential for relieving traffic congestion. One basic technique would be to remove parking from the bus travel lanes, and strictly enforce parking restrictions. Signal system modification represents another potential area for enhancement.

Bus stop turnouts are not considered practical on urban SRAs. On a route-specific basis, however, both the locations and spacing of bus stops will be reviewed. Major objectives would be to eliminate stops in excess of one per block, and to eliminate conflicts with right turns. Where the blocks are short, as in the central area, stops could be located at every second block.

### Exclusive Bus Lanes

Another strategy to improve travel times is to establish exclusive lanes for buses and HOV during the morning and evening peak travel periods. This approach would be reserved for SRAs with at least three traffic lanes in each direction (see Figure 1, which illustrates the "diamond lane" concept). A companion measure essential to the effectiveness of exclusive lanes is minimizing access points to the roadway by eliminating curb cuts wherever possible.

Figure 2 illustrates median bus lane treatment on an urban SRA route. If this treatment is adopted, automobile left turns from the urban SRA route should be permitted only at other SRA routes.

Lanes on urban SRA routes could also be dedicated to buses that travel in the reverse direction from the normal traffic flow. Figure 3 gives an example of a typical transit contra-flow lane. Contra-flow lanes have been used in downtown Chicago, and have been very effective in reducing both bus travel times and bus operating expenses. However, because of accident potential, transit contra-flow lanes are generally only recommended when additional lanes cannot be added easily because of space limitations and where reserve capacity is available in the non-peak direction.

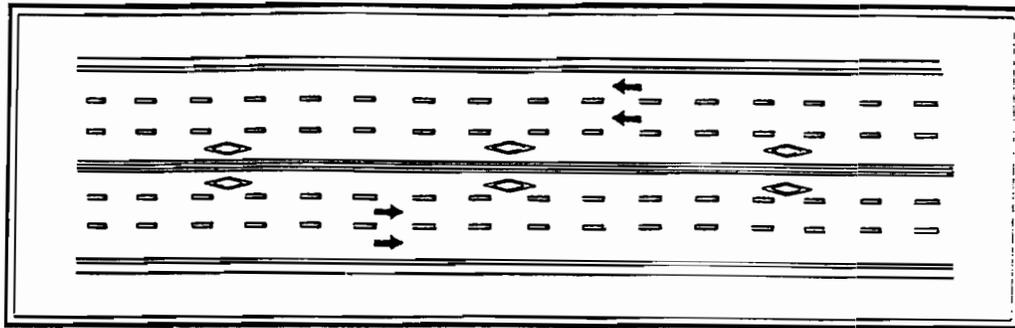


Figure 1 "Diamond Lanes"

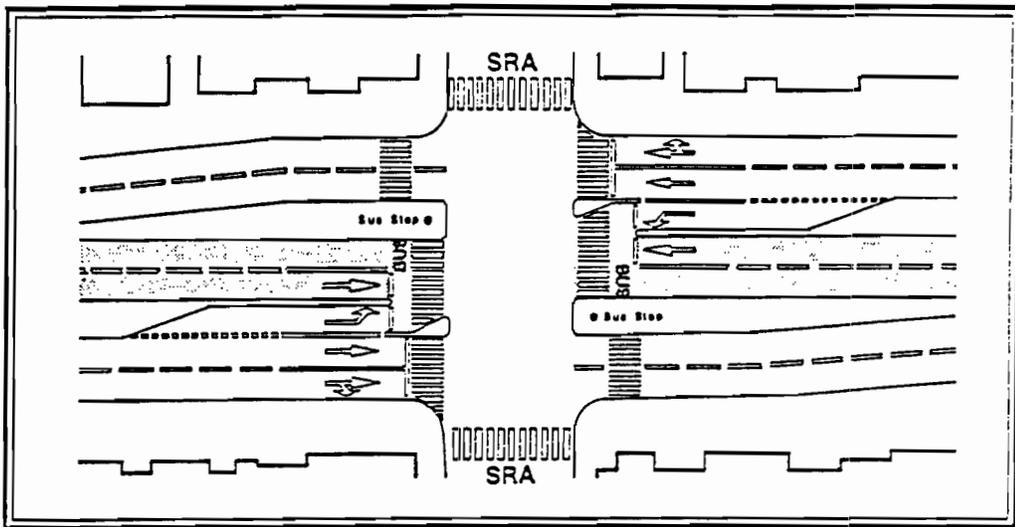


Figure 2 Center Bus Lane Treatment - Urban SRA

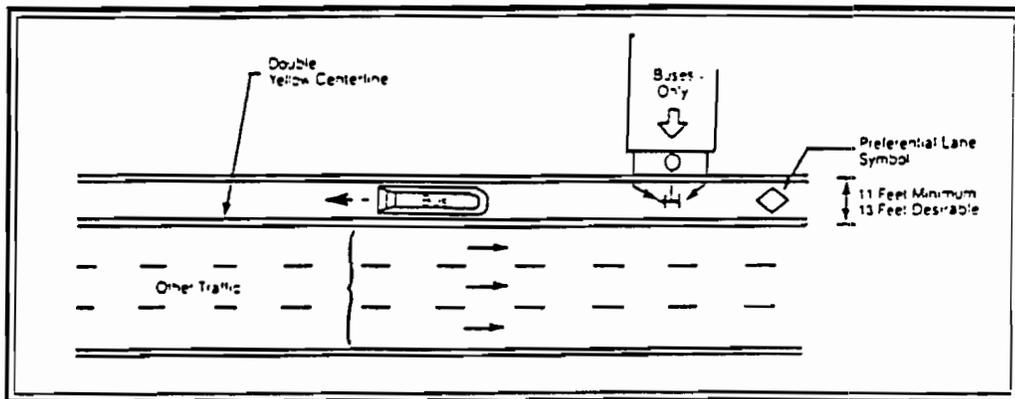


Figure 3 Typical Transit Contra-Flow Lane

## Identifying Opportunities for Future Transit Facilities

Plans for SRA routes will consider opportunities to incorporate future transit and associated facilities such as:

- Busways
- High-Occupancy Vehicle (HOV) Lanes
- Ridesharing Facilities

Furthermore, SRA routes will consider incorporating future light - rail systems or circulator and shuttle systems where future plans already exist.

## Maintaining Pedestrian Accessibility

Safe movement and accessibility are key issues for bicycles and pedestrians. The urban SRA corridors are likely to experience the greatest concentration of pedestrians and cyclists. The density of developments coupled with shorter trip-making encourage these travel modes. Additionally, the urban SRA routes experience heavy traffic volumes. In these urban areas, close parallel routes are usually present and continuous. These parallel facilities should be identified as bicycle routes so that the SRA routes can focus on their primary responsibility—carrying regional traffic. The design of most urban SRA routes already includes sidewalks for pedestrians and should continue to do so under maximum design. Handicapped access ramps for pedestrians also will be considered at intersections and curb cut locations.

On rural and suburban SRA routes, more options are available for handling pedestrian and bicycle access. Foreexample, while right-of-way availability is still a critical issue, dense development immediately adjacent to the roadway may not be as common an occurrence as in urban areas. In certain cases provisions for bicycles and pedestrians may be accommodated within the SRA right-of-way itself. In these situations, alternative parallel routes may not always be available. The choice of how to provide access within the SRA corridor will be based on each unique situation. Where an existing bicycle and pedestrian facility already exists, the goal is to have a continuous system of bicycles and pedestrian facilities.

## U.S. 12 Project Status

To date, about 30 percent of the study of U.S. 12 is complete. In October, IDOT and the consultant team held the first Advisory Panel Meetings. At these meetings, the existing conditions of the U.S. 12 corridor were reviewed with panel members. The second Advisory Panel Meeting is scheduled for the spring of 1992. Advisory Panel members will be contacted in the near future to set the date, time, and location. At this second meeting, the panel will discuss long-range alternatives for improvements to the U.S. 12 corridor. The third Advisory Panel Meeting is scheduled to take place in the summer of 1992, and a Public Hearing is scheduled tentatively for the fall of 1992.

### SRA SPOTLIGHT

**Publisher:**

The Illinois Department of Transportation

**Editor:**

**CHM HILL**

**For:**

The Strategic Regional Arterials Plan

Advisory Panel

**Coordinator:**

David Seglin

Northwest Municipal Conference

**Panel Members:**

Arlington Heights - William O. Maki, President  
Des Plaines - D. Michael Albrecht, Mayor  
Mt. Prospect - Gerald L. (Skip) Farley, President  
Palatine - Gregory Solberg, Trustee  
Prospect Heights - Edward Rotchford, Mayor



# SRA SPOTLIGHT

U.S. 12 CORRIDOR ADVISORY PANEL

## Relationship of Transportation Planning to Land Use and Development

### Land Use and the SRA Plan

The success of today's transportation system and the viability of its future depend upon integrating arterial improvements with future development plans. Road improvements have the potential to stimulate land use changes, which in turn, can impact the efficiency of the transportation system. Improved accessibility, a common component of transportation system improvement plans, can influence land development, particularly when combined with other contributing factors such as land availability, market trends, local zoning and land use policies, water and sewer extension policies, and proximity to population centers.

The Strategic Regional Arterial (SRA) network, which consists of 1,340 miles of existing roads, encompasses 146 routes in Cook, DuPage, Kane, Lake, McHenry, and Will Counties. Within this network there are significant differences in the roadway environment that determine how various types of routes may function in the system. Land use impacts also will vary, depending upon whether the route traverses an urban, suburban, or rural area. In rural or suburban areas, there may be large tracts of vacant land that may undergo development, requiring coordinated access; in urban areas, maintaining or improving access and parking to existing developments are primary issues.

In high-demand areas, consideration of access management and design improvements are necessary to ensure maintenance of a good level of service. A key element of the SRA plan is to balance the goals of an arterial's function, to carry high volumes of long-distance traffic, with existing and future land use access needs. This may be accomplished by:

- Understanding future regional growth trends; and
- Understanding and accommodating local planning efforts.

### *Understanding Future Regional Growth Trends*

By the year 2010, substantial increases in population, number of households, and employment are projected for the Chicago metropolitan region. Total population is projected to grow by 17.2 percent—from 7.1 million in 1980 to over 8.3 million by 2010. Population growth will be most significant outside of Cook County (which contains the city of Chicago) in the suburban counties. Each of the six counties, with the exception of Cook County, is projected to grow by nearly 50 percent over the 30-year period (1980 to 2010). The following table details population growth and percent change over the 30-year period.

Projected Population Change, 1980-2010				
County	1980	2010	Population Increase	Percent Change
Cook	5,253,700	5,567,400	313,700	6.0
DuPage	658,800	985,600	326,800	50.0
Kane	278,400	426,100	147,700	53.1
Lake	440,400	640,700	200,300	45.5
McHenry	147,900	235,800	87,900	59.4
Will	324,500	472,400	147,900	45.6
<b>Region</b>	<b>7,103,600</b>	<b>8,327,900</b>	<b>1,224,300</b>	<b>17.2</b>

Source: Northeastern Illinois Planning Commission

Changing demographics have altered household structure, bringing a dramatic increase in the number of single-person and single-parent-headed households, a factor that will continue to shape markets in the coming years. In the region, the number of households is projected to increase by 31.1 percent (774,000 new house-

## U.S. 12 Corridor

holds) between 1980 and 2010—reaching over 3.2 million. Nearly half of the new households will be in Cook County, which will add close to 350,000 households. Lake, Kane, McHenry, Will, and DuPage Counties will see the greatest percent change—with households increasing by well over 50 percent of 1980 levels.

Projected Household Change, 1980-2010				
County	1980	2010	Household Increase	Percent Change
Cook	1,879,400	2,228,000	348,600	18.5
DuPage	222,000	368,500	146,500	67.0
Kane	93,700	160,100	66,400	70.9
Lake	139,700	240,200	100,500	72.0
McHenry	49,100	87,800	38,700	78.8
Will	103,100	170,900	67,800	65.7
<b>Region</b>	<b>2,486,700</b>	<b>3,260,700</b>	<b>774,000</b>	<b>31.1</b>

Source: Northeastern Illinois Planning Commission

The region's employment is projected to increase by 34.6 percent by 2010—to over 4.5 million jobs. Cook, DuPage, and Lake Counties will continue to be the major employment centers in the region. Employment in DuPage County is projected to more than double over the 30-year time period—from 284,700 to 641,500 jobs. In Lake County, the number of jobs will increase from 162,000 to 306,700 between 1980 and 2010.

Projected Employment Change, 1980-2010				
County	1980	2010	Employment Increase	Percent Change
Cook	2,697,000	3,249,100	551,100	20.5
DuPage	284,700	641,500	356,800	125.3
Kane	119,100	174,400	55,300	46.4
Lake	162,000	306,700	144,700	89.3
McHenry	47,000	73,200	26,200	55.7
Will	91,700	134,100	42,400	46.2
<b>Region</b>	<b>3,401,400</b>	<b>4,579,100</b>	<b>1,777,700</b>	<b>34.6</b>

Source: Northeastern Illinois Planning Commission

### Understanding and Accommodating Local Land Use Plans

To provide an SRA corridor plan that addresses future development, comprehensive land use plans requested from each community have been integrated into the SRA transportation planning effort. From these land use plans, it is possible to make a better determination of:

- Potential future access locations
- Need for frontage roads, collector roads, etc.
- Optimal future traffic signal locations
- Potential for development of transit plans

In existing or future areas of intense commercial development, SRA corridor planning can focus on:

- Consolidating driveways, coordinating closely-spaced access points
- Mitigating impacts to on-street parking
- Optimal median types and dimensions (such as raised versus flush medians)

In residential areas, or near parks and schools, the corridor plan can focus on:

- Accommodating pedestrian activities
- Addressing aesthetic issues to minimize adverse visual impacts of corridor improvements

It is important to note that local units of government control land use and development. The SRA corridor plan attempts to coordinate future transportation needs based on community plans, but if land use policy changes, or if a land use plan is not implemented, the transportation system will be affected. Thus, a good transportation system depends upon implementation of effective land use controls and enforcement of land use plans.

### Land Use Considerations in the U.S. 12 Corridor

This SRA segment includes areas along U.S. 12 from Golf Road to Lake Cook Road. The corridor is shown on the accompanying map. This segment of the corridor is classified as a "suburban" SRA.

## U.S. 12 Corridor

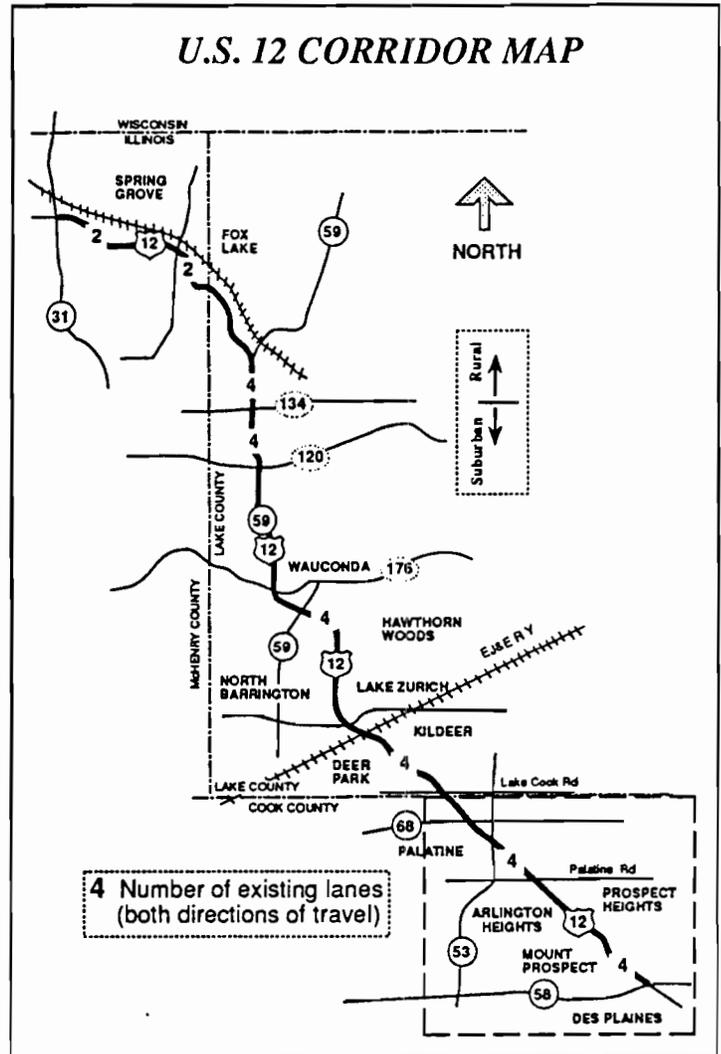
Notable areas where land use is changing, or where trends imply future potential access concerns, are:

- There are intense commercial areas at the U.S. 12 intersections with Central Road, Elmhurst Road, Willow Road, Palatine Road, Arlington Heights Road, and Dundee Road.
- Existing residential development along this portion of the U.S. 12 Corridor is multi-family in nature.

Considerations for mitigating potential adverse impacts of future development could include providing access control, requiring additional right-of-way reservations for frontage roads, or providing enhanced access to the development or site.

### U.S. 12 Corridor Project Status

The SRA study of the U.S. 12 Corridor is temporarily on hold. It is anticipated that the study will resume shortly. At that time, the second Advisory Panel Meeting will be scheduled and panel members will be notified. At the second panel meeting, alternative improvements under



### SRA SPOTLIGHT

#### Advisory Panel

**Publisher:**  
The Illinois Department of Transportation

**Editor:**  
**CH2M HILL**

**For:**  
The Strategic Regional Arterials Plan

**Coordinator:**  
David Seglin  
Northwest Municipal Conference

**Panel Members:**  
Arlington Heights - William O. Maki, President  
Des Plaines - D. Michael Albrecht, Mayor  
Mt. Prospect - Gerald L. (Skip) Farley, President  
Palatine - Gregory Solberg, Trustee  
Prospect Heights - Edward Rotchford, Mayor

---

---

## LET US HEAR FROM YOU

---

---

Do You Have Questions or Comments? \_\_\_\_\_

Is Your Address Correct? \_\_\_\_\_

Please Send Questions, Comments, or Address Changes to:

**David Seglin  
Northwest Municipal Conference  
1616 Wolf Road  
Des Plaines, Illinois 60016**

# SRA SPOTLIGHT

## U.S. 12 CORRIDOR ADVISORY PANEL

### Relationship of Transportation Planning to Land Use and Development

#### Land Use and the SRA Plan

The success of today's transportation system and the viability of its future depend upon integrating arterial improvements with future development plans. Road improvements have the potential to stimulate land use changes, which in turn, can impact the efficiency of the transportation system. Improved accessibility, a common component of transportation system improvement plans, can influence land development, particularly when combined with other contributing factors such as land availability, market trends, local zoning and land use policies, water and sewer extension policies, and proximity to population centers.

The Strategic Regional Arterial (SRA) network, which consists of 1,340 miles of existing roads, encompasses 146 routes in Cook, DuPage, Kane, Lake, McHenry, and Will Counties. Within this network there are significant differences in the roadway environment that determine how various types of routes may function in the system. Land use impacts also will vary, depending upon whether the route traverses an urban, suburban, or rural area. In rural or suburban areas, there may be large tracts of vacant land that may undergo development, requiring coordinated access; in urban areas, maintaining or improving access and parking to existing developments are primary issues.

In high-demand areas, consideration of access management and design improvements are necessary to ensure maintenance of a good level of service. A key element of the SRA plan is to balance the goals of an arterial's function, to carry high volumes of long-distance traffic, with existing and future land use access needs. This may be accomplished by:

- Understanding future regional growth trends; and
- Understanding and accommodating local planning efforts.

#### *Understanding Future Regional Growth Trends*

By the year 2010, substantial increases in population, number of households, and employment are projected for the Chicago metropolitan region. Total population is projected to grow by 17.2 percent—from 7.1 million in 1980 to over 8.3 million by 2010. Population growth will be most significant outside of Cook County (which contains the city of Chicago) in the suburban counties. Each of the six counties, with the exception of Cook County, is projected to grow by nearly 50 percent over the 30-year period (1980 to 2010). The following table details population growth and percent change over the 30-year period.

Projected Population Change, 1980-2010				
County	1980	2010	Population Increase	Percent Change
Cook	5,253,700	5,567,400	313,700	6.0
DuPage	658,800	985,600	326,800	50.0
Kane	278,400	426,100	147,700	53.1
Lake	440,400	640,700	200,300	45.5
McHenry	147,900	235,800	87,900	59.4
Will	324,500	472,400	147,900	45.6
<b>Region</b>	<b>7,103,600</b>	<b>8,327,900</b>	<b>1,224,300</b>	<b>17.2</b>

Source: Northeastern Illinois Planning Commission

Changing demographics have altered household structure, bringing a dramatic increase in the number of single-person and single-parent-headed households, a factor that will continue to shape markets in the coming years. In the region, the number of households is projected to increase by 31.1 percent (774,000 new house-

## U.S. 12 Corridor

holds) between 1980 and 2010—reaching over 3.2 million. Nearly half of the new households will be in Cook County, which will add close to 350,000 households. Lake, Kane, McHenry, Will, and DuPage Counties will see the greatest percent change—with households increasing by well over 50 percent of 1980 levels.

Projected Household Change, 1980-2010				
County	1980	2010	Household Increase	Percent Change
Cook	1,879,400	2,228,000	348,600	18.5
DuPage	222,000	368,500	146,500	67.0
Kane	93,700	160,100	66,400	70.9
Lake	139,700	240,200	100,500	72.0
McHenry	49,100	87,800	38,700	78.8
Will	103,100	170,900	67,800	65.7
<b>Region</b>	<b>2,486,700</b>	<b>3,260,700</b>	<b>774,000</b>	<b>31.1</b>

Source: Northeastern Illinois Planning Commission

The region's employment is projected to increase by 34.6 percent by 2010—to over 4.5 million jobs. Cook, DuPage, and Lake Counties will continue to be the major employment centers in the region. Employment in DuPage County is projected to more than double over the 30-year time period—from 284,700 to 641,500 jobs. In Lake County, the number of jobs will increase from 162,000 to 306,700 between 1980 and 2010.

Projected Employment Change, 1980-2010				
County	1980	2010	Employment Increase	Percent Change
Cook	2,697,000	3,249,100	551,100	20.5
DuPage	284,700	641,500	356,800	125.3
Kane	119,100	174,400	55,300	46.4
Lake	162,000	306,700	144,700	89.3
McHenry	47,000	73,200	26,200	55.7
Will	91,700	134,100	42,400	46.2
<b>Region</b>	<b>3,401,400</b>	<b>4,579,100</b>	<b>1,777,700</b>	<b>34.6</b>

Source: Northeastern Illinois Planning Commission

### Understanding and Accommodating Local Land Use Plans

To provide an SRA corridor plan that addresses future development, comprehensive land use plans requested from each community have been integrated into the SRA transportation planning effort. From these land use plans, it is possible to make a better determination of:

- Potential future access locations
- Need for frontage roads, collector roads, etc.
- Optimal future traffic signal locations
- Potential for development of transit plans

In existing or future areas of intense commercial development, SRA corridor planning can focus on:

- Consolidating driveways, coordinating closely-spaced access points
- Mitigating impacts to on-street parking
- Optimal median types and dimensions (such as raised versus flush medians)

In residential areas, or near parks and schools, the corridor plan can focus on:

- Accommodating pedestrian activities
- Addressing aesthetic issues to minimize adverse visual impacts of corridor improvements

It is important to note that local units of government control land use and development. The SRA corridor plan attempts to coordinate future transportation needs based on community plans, but if land use policy changes, or if a land use plan is not implemented, the transportation system will be affected. Thus, a good transportation system depends upon implementation of effective land use controls and enforcement of land use plans.

### Land Use Considerations in the U.S. 12 Corridor

This SRA segment includes areas along U.S. 12 from Lake Cook Road north to Illinois Route 31. The corridor is shown on the accompanying map. Within this segment, the corridor carries two SRA facility classifications: the corridor is classified "suburban" from Lake Cook Road to Illinois Route 59 and "rural" from Illinois Route 59 to Illinois Route 31.

## U.S. 12 Corridor

Notable areas where land use is changing, or where trends imply future potential access concerns, are:

- Between Lake Cook Road and Quentin Road, land use is planned to develop commercially.
- Through Lake Zurich, corridor land use is expected to remain residential and commercial in nature.
- A regional mall has been approved for development at Illinois Route 120 and U.S. 12.
- North of Fox Lake, sensitive environmental areas limit land availability for development, and many areas will remain open and undeveloped.
- Through Spring Grove, between Richardson and Winn Roads, land adjacent to the corridor is expected to develop commercially and industrially. North of Winn Road, residential development will predominate.

### SRA SPOTLIGHT

**Publisher:**

The Illinois Department of Transportation

**Editor:**

**CH2M HILL**

**For:**

The Strategic Regional Arterials Plan

**Advisory Panel**

**Coordinator:**

Mark Schmidt

Lake County Division of Transportation

**Panel Members:**

Deer Park - James M. Peterson, President

Fox Lake - Francis A. Meier, President

Hawthorn Woods - Glen H. Grieshaber, President

Kildeer - George L. Welch, President

Lakemoor - Charles E. Godt, President

Lake Zurich - James W. Kay, Mayor

North Barrington - Walter R. Clarke, Jr., President

Spring Grove - John Toler, Mayor

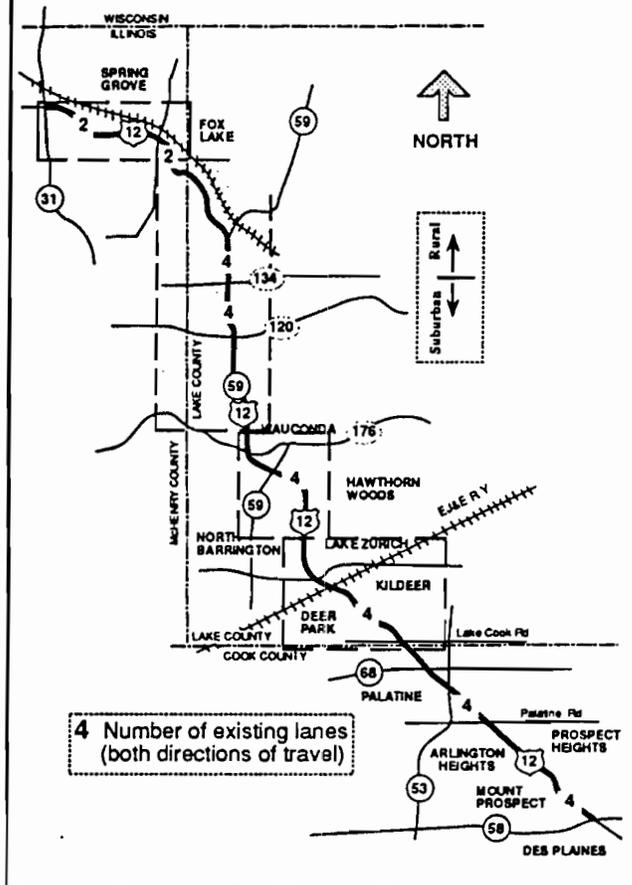
Wauconda - James P. Keagle, Sr., Mayor

Lake County - Martin G. Buehler, Director of

Transportation

McHenry County - James R. Rakow, Superintendent of Highways

### U.S. 12 CORRIDOR MAP



Considerations for mitigating potential adverse impacts of future development could include providing access control, requiring additional right-of-way reservations for frontage roads, or providing enhanced access to the development or site.

### U.S. 12 Corridor Project Status

The SRA study of the U.S. 12 corridor is temporarily on hold. It is anticipated that the study will resume shortly. At that time, the second Advisory Panel Meeting will be scheduled and panel members will be notified. At the second panel meeting, alternative improvements under consideration will be presented and discussed.

---

---

# LET US HEAR FROM YOU

Do You Have Questions or Comments? \_\_\_\_\_

Is Your Address Correct? \_\_\_\_\_

Please Send Questions, Comments, or Address Changes to:

**Mark Schmidt  
Planning & Program  
Lake County Division of Transportation  
600 Winchester Road  
Libertyville, Illinois 60048**

# SRA SPOTLIGHT

U.S. 12 CORRIDOR ADVISORY PANEL

## The Function of a Strategic Regional Arterial

For streets and highways in metropolitan areas to operate efficiently, the functions they are to perform must be classified, and the types of facilities that best accommodate these functions must be identified. Facilities designed specifically for a given type of movement suit that purpose best; matching use and design helps to ensure consistent, uniform flow, which contributes to operational efficiency and safety.<sup>1</sup> An area's street and highway system can be classified schematically by relating the proportion of *movement* function to *access* function. This concept is illustrated graphically in the accompanying chart. At its functional extreme, a local access or residential street is devoted almost entirely to providing access to abutting properties; the freeway, on the other hand, serves only the movement function.

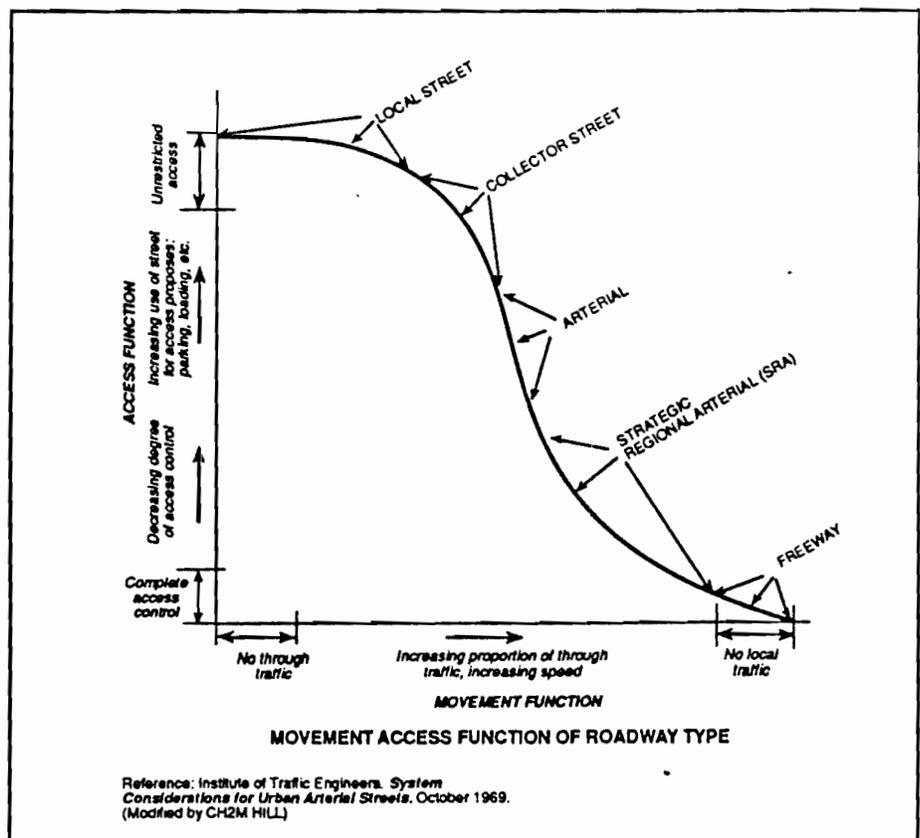
The Illinois Department of Transportation (IDOT) has designated 1,340 miles of existing roadways in northeastern Illinois as *Strategic Regional Arterials* (SRAs). This functional classification falls between the general "arterial" category and "freeway" class.

SRAs are intended to provide more of the movement function, and less access to abutting land uses, than

"arterial" roadways. Also, on SRAs trip lengths will be longer and movement will be faster than on other arterial or collector streets. However, despite the focus on accommodating the movement function, considering the access function also is vital because SRA routes pass through numerous villages and cities.

### SRA Benefits

Communities affected by SRAs often ask: "What is achieved by the SRA system?" or "How will SRA improvements benefit my community?" The remainder



<sup>1</sup>Gruen Associates. *Traffic Circulation Planning for Communities*. 1974.

of this newsletter addresses and provides answers to these questions.

Local communities benefit from SRA designation and planning by realizing the following improvements:

- Enhanced traffic safety
- Improved traffic operations
- Reduced environmental impacts
- Reduced neighborhood impacts
- Increased local land use and transportation planning

These benefits may result from physical improvement of SRA routes and/or the overall planning process leading to implementation of the SRA concept.

### Improvement Benefits

Benefits in safety, traffic operations, and the environment result directly from SRA improvements to the number and arrangement of driving lanes, traffic and access controls, and lane arrangements at intersections.

#### *Safety*

Driver and pedestrian safety on SRAs may be enhanced by improving intersections and medians, by controlling access, and, in some instances, by restricting or prohibiting parking.

#### Intersection Improvements

Research shows that adding a channelized left-turn lane at an intersection reduces accidents significantly. Although adding turning lanes is the most obvious example of a physical intersection improvement, coordinating traffic signal timing between several intersections or revising signal phasing, which are less obvious, also are important improvement considerations. Separate signal phases for pedestrians and cyclists also may be implemented to enhance safety on a SRA.

#### Median Improvements

Providing a raised or a painted median for a SRA separates opposing traffic flows and affords a “refuge” for pedestrians crossing the street. Two-way left-turn lanes that allow left turns at all locations along the SRA have been shown to result in accident reductions of 25 percent or more.

For higher-speed rural facilities, dramatic safety improvements result when a four-lane divided highway can be implemented (versus a two- or four-lane undivided roadway).

#### Access Management

Frequent access drives along a SRA—with consequent turns into and out of roadside development—are another source of accidents. Research shows that restricting the frequency of driveways, or restricting left turns at driveways at a minimum, will result in a lower accident rate. Improved access management, which goes along with development of the SRA system, also can enhance driver and pedestrian safety.

#### Parking Regulation

Eliminating or restricting curb parking on some portions of the SRA system will not only promote better traffic flow, but will eliminate accidents that may be attributed to parking and “un-parking” maneuvers. In order to support local activity and to satisfy parking demand, parking spaces that are removed from the curb usually will need to be replaced in off-street facilities, where parking can be managed easily and accessed safely.

#### *Traffic Operations*

Along with safety enhancements, physical improvements to the street system such as adding lanes, providing a median, or controlling access also promote better traffic operations. Drivers will be able to complete their journey on a SRA with fewer starts and stops, and at consistent, acceptable, and safe speeds.

### *Environmental Impacts*

Good traffic operations produce an important benefit: reduced fuel consumption and a resultant air quality improvement. Vehicles travelling smoothly emit less pollutants than vehicles under congested flow conditions. In the Chicago metropolitan area, which has been designated a "severe non-attainment area" for air quality, maintaining smooth, efficient traffic operations is critical. Motor vehicles contribute as much as 60 percent of ozone-forming pollutants—a significant component of the smog that occurs on hot days. Pollutant emissions are a particular problem in areas of congestion; high emissions result from frequent stops, long periods of vehicle idling, and very low speeds. More efficient traffic flow on the SRA network, therefore, will help the Chicago area to meet its clean air objectives.

### **System Benefits**

Along with direct safety, operations, and environmental benefits that will result from SRA improvements, there also are several important systemwide advantages to be gained from the SRA program.

### **Neighborhood Impacts**

Ultimately, the objective of designating functional classifications for the street and highway system is to ensure that the specific roadway category is used by the type of driver for which it is intended. When "through" traffic intrudes into residential neighborhoods, the blame almost always can be placed on inadequacies in the arterial system (which the drivers should have used for those trips instead). A key objective of planning and providing an effective SRA system is to afford and to promote a viable travel alternative and, consequently, to rid local streets of unnecessary and unwanted through traffic. The result will be safer, quieter, cleaner, and generally more pleasant residential neighborhoods.

### **Business District Impacts**

Many SRAs pass through local business districts. Optimizing traffic flow into and through the business district at safe speeds can help the district to retain its vitality and to reinforce consumer attraction. It is important to strike a balance between the needs of shoppers and pedestrians, and the needs of drivers approaching and passing through the business district. Relocation of on-street parking, special attention to transit stops, and selected intersection improvements all serve to maintain and to enhance both accessibility to the business district (and improve SRA operations).

### **Land Use and Transportation Planning**

The present, ongoing SRA studies fall under the category of feasibility studies or advance planning. The various improvements to the SRA system that are proposed in these plans will be implemented in increments over a relatively long time span. The plans take on added importance, therefore, as the framework for a comprehensive long-range transportation program.

Once the number of traffic lanes and access controls for a particular SRA have been determined, local communities along the route will be able to implement plans and regulations to preserve the required right-of-way, to plan for access to future development, to provide adequate setbacks, and to support appropriate zoning. Because each SRA route penetrates numerous communities, a long-range comprehensive plan also affords local agencies an opportunity to cooperate and coordinate their land use and transportation planning efforts, which will facilitate implementation.

### **SRA Benefits for U.S. 12**

The SRA plan for the U.S. 12 corridor should produce a range of benefits to the public and the local communities it serves. Alternatives for improvement are still under consideration, and include:

- Additional through lanes
- Signal and intersection capacity improvements
- Consideration of grade-separated interchanges
- Access management schemes

---

## U.S. 12 Corridor

---

Recommended improvements will be designed to improve the existing safety and operation of the corridor, to relieve congestion, to provide greater capacity, to improve air quality, and to minimize environmental and other potential impacts.

### Corridor Planning Status

At the last meeting of the U.S. 12 Corridor Advisory Panel on October 1, 1991, existing conditions and concerns were presented to the panel. Since that meeting, the SRA study of U.S. 12 has been suspended temporarily, pending input from the study by the Corridor Planning Council regarding FAP 342. It is anticipated that the study will resume shortly, at which time the second advisory panel meeting will be scheduled and panel members will be notified. At this second panel meeting, alternative improvements under consideration will be presented and discussed.

.....  
**SRA SPOTLIGHT**  
.....

**Publisher:**

The Illinois Department of Transportation

**Editor:**

**CEMHILL**

**For:**

The Strategic Regional Arterials Plan

**Advisory Panel**

**Coordinator:**

David Seglin

Northwest Municipal Conference

**Panel Members:**

Arlington Heights - William O. Maki, President

Des Plaines - D. Michael Albrecht, Mayor

Mt. Prospect - Gerald L. (Skip) Farley, President

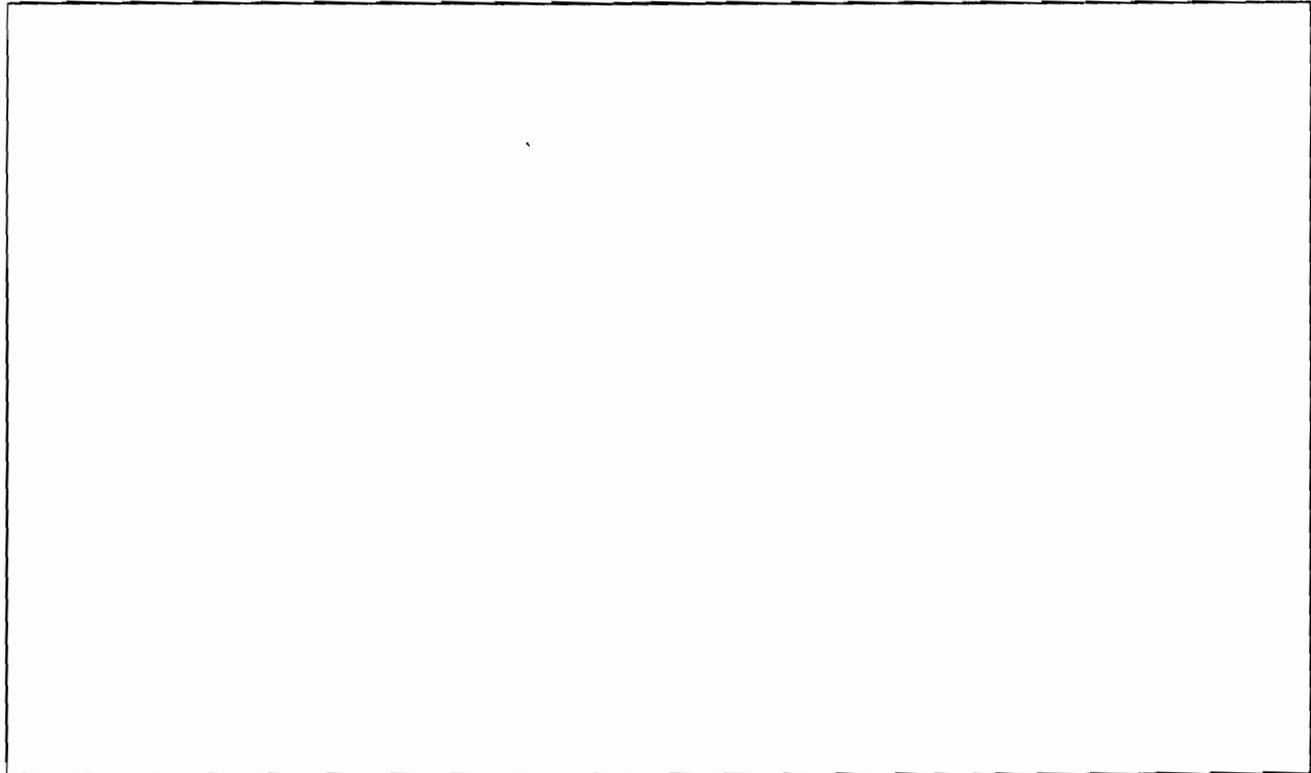
Palatine - Gregory Solberg, Trustee

Prospect Heights - Edward Rotchford, Mayor

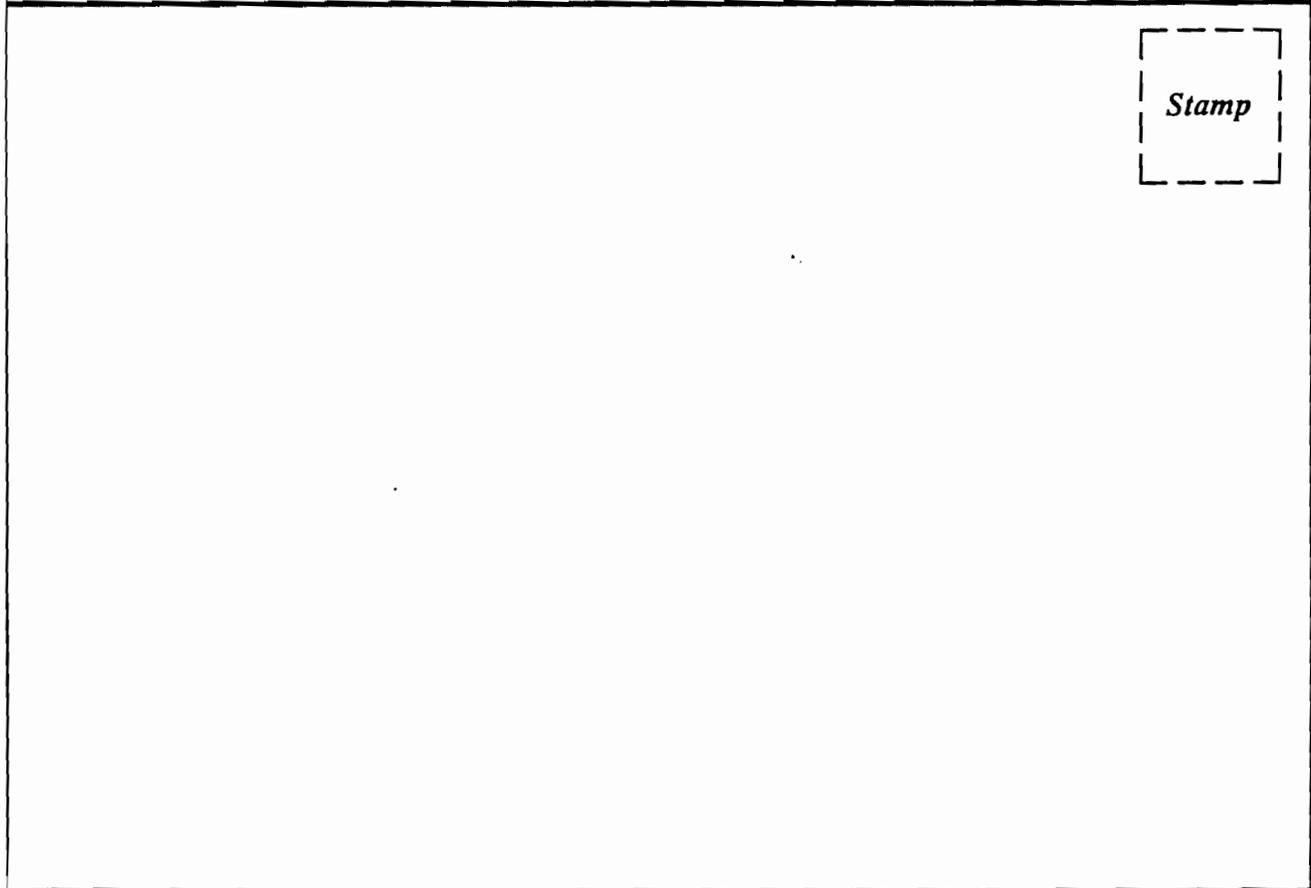


---

# SRA NEWSLETTER NO. 5



*Stamp*



# SRA SPOTLIGHT

U.S. 12 CORRIDOR ADVISORY PANEL

## The Function of a Strategic Regional Arterial

For streets and highways in metropolitan areas to operate efficiently, the functions they are to perform must be classified, and the types of facilities that best accommodate these functions must be identified. Facilities designed specifically for a given type of movement suit that purpose best; matching use and design helps to ensure consistent, uniform flow, which contributes to operational efficiency and safety.<sup>1</sup> An area's street and highway system can be classified schematically by relating the proportion of *movement* function to *access* function. This concept is illustrated graphically in the accompanying chart. At its functional extreme, a local access or residential street is devoted almost entirely to providing access to abutting properties; the freeway, on the other hand, serves only the movement function.

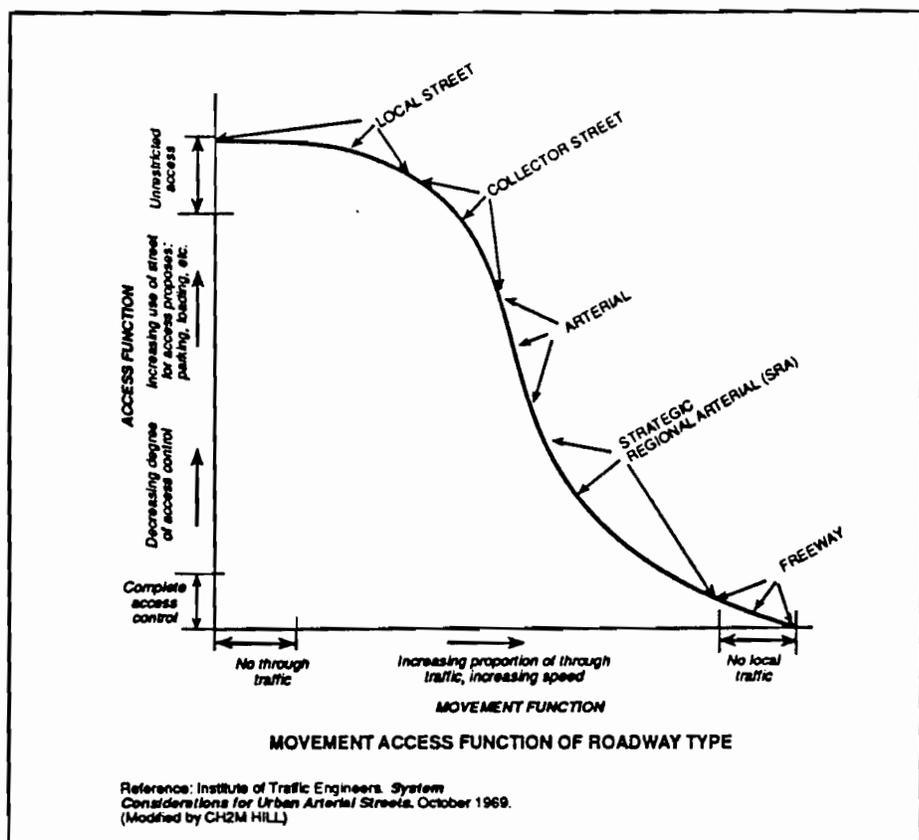
The Illinois Department of Transportation (IDOT) has designated 1,340 miles of existing roadways in northeastern Illinois as *Strategic Regional Arterials* (SRAs). This functional classification falls between the general "arterial" category and "freeway" class.

SRAs are intended to provide more of the movement function, and less access to abutting land uses, than

"arterial" roadways. Also, on SRAs trip lengths will be longer and movement will be faster than on other arterial or collector streets. However, despite the focus on accommodating the movement function, considering the access function also is vital because SRA routes pass through numerous villages and cities.

### SRA Benefits

Communities affected by SRAs often ask: "What is achieved by the SRA system?" or "How will SRA improvements benefit my community?" The remainder



<sup>1</sup>Gruen Associates. *Traffic Circulation Planning for Communities*. 1974.

of this newsletter addresses and provides answers to these questions.

Local communities benefit from SRA designation and planning by realizing the following improvements:

- Enhanced traffic safety
- Improved traffic operations
- Reduced environmental impacts
- Reduced neighborhood impacts
- Increased local land use and transportation planning

These benefits may result from physical improvement of SRA routes and/or the overall planning process leading to implementation of the SRA concept.

### Improvement Benefits

Benefits in safety, traffic operations, and the environment result directly from SRA improvements to the number and arrangement of driving lanes, traffic and access controls, and lane arrangements at intersections.

#### *Safety*

Driver and pedestrian safety on SRAs may be enhanced by improving intersections and medians, by controlling access, and, in some instances, by restricting or prohibiting parking.

#### Intersection Improvements

Research shows that adding a channelized left-turn lane at an intersection reduces accidents significantly. Although adding turning lanes is the most obvious example of a physical intersection improvement, coordinating traffic signal timing between several intersections or revising signal phasing, which are less obvious, also are important improvement considerations. Separate signal phases for pedestrians and cyclists also may be implemented to enhance safety on a SRA.

#### Median Improvements

Providing a raised or a painted median for a SRA separates opposing traffic flows and affords a “refuge” for pedestrians crossing the street. Two-way left-turn lanes that allow left turns at all locations along the SRA have been shown to result in accident reductions of 25 percent or more.

For higher-speed rural facilities, dramatic safety improvements result when a four-lane divided highway can be implemented (versus a two- or four-lane undivided roadway).

#### Access Management

Frequent access drives along a SRA—with consequent turns into and out of roadside development—are another source of accidents. Research shows that restricting the frequency of driveways, or restricting left turns at driveways at a minimum, will result in a lower accident rate. Improved access management, which goes along with development of the SRA system, also can enhance driver and pedestrian safety.

#### Parking Regulation

Eliminating or restricting curb parking on some portions of the SRA system will not only promote better traffic flow, but will eliminate accidents that may be attributed to parking and “un-parking” maneuvers. In order to support local activity and to satisfy parking demand, parking spaces that are removed from the curb usually will need to be replaced in off-street facilities, where parking can be managed easily and accessed safely.

#### *Traffic Operations*

Along with safety enhancements, physical improvements to the street system such as adding lanes, providing a median, or controlling access also promote better traffic operations. Drivers will be able to complete their journey on a SRA with fewer starts and stops, and at consistent, acceptable, and safe speeds.

### *Environmental Impacts*

Good traffic operations produce an important benefit: reduced fuel consumption and a resultant air quality improvement. Vehicles travelling smoothly emit less pollutants than vehicles under congested flow conditions. In the Chicago metropolitan area, which has been designated a "severe non-attainment area" for air quality, maintaining smooth, efficient traffic operations is critical. Motor vehicles contribute as much as 60 percent of ozone-forming pollutants—a significant component of the smog that occurs on hot days. Pollutant emissions are a particular problem in areas of congestion; high emissions result from frequent stops, long periods of vehicle idling, and very low speeds. More efficient traffic flow on the SRA network, therefore, will help the Chicago area to meet its clean air objectives.

### **System Benefits**

Along with direct safety, operations, and environmental benefits that will result from SRA improvements, there also are several important systemwide advantages to be gained from the SRA program.

### **Neighborhood Impacts**

Ultimately, the objective of designating functional classifications for the street and highway system is to ensure that the specific roadway category is used by the type of driver for which it is intended. When "through" traffic intrudes into residential neighborhoods, the blame almost always can be placed on inadequacies in the arterial system (which the drivers should have used for those trips instead). A key objective of planning and providing an effective SRA system is to afford and to promote a viable travel alternative and, consequently, to rid local streets of unnecessary and unwanted through traffic. The result will be safer, quieter, cleaner, and generally more pleasant residential neighborhoods.

### **Business District Impacts**

Many SRAs pass through local business districts. Optimizing traffic flow into and through the business district at safe speeds can help the district to retain its vitality and to reinforce consumer attraction. It is important to strike a balance between the needs of shoppers and pedestrians, and the needs of drivers approaching and passing through the business district. Relocation of on-street parking, special attention to transit stops, and selected intersection improvements all serve to maintain and to enhance both accessibility to the business district (and improve SRA operations).

### **Land Use and Transportation Planning**

The present, ongoing SRA studies fall under the category of feasibility studies or advance planning. The various improvements to the SRA system that are proposed in these plans will be implemented in increments over a relatively long time span. The plans take on added importance, therefore, as the framework for a comprehensive long-range transportation program.

Once the number of traffic lanes and access controls for a particular SRA have been determined, local communities along the route will be able to implement plans and regulations to preserve the required right-of-way, to plan for access to future development, to provide adequate setbacks, and to support appropriate zoning. Because each SRA route penetrates numerous communities, a long-range comprehensive plan also affords local agencies an opportunity to cooperate and coordinate their land use and transportation planning efforts, which will facilitate implementation.

### **SRA Benefits for U.S. 12**

The SRA plan for the U.S. 12 corridor should produce a range of benefits to the public and the local communities it serves. Alternatives for improvement are still under consideration, and include:

- Additional through lanes
- Signal and intersection capacity improvements
- Consideration of grade-separated interchanges
- Access management schemes

---

## U.S. 12 Corridor

---

Recommended improvements will be designed to improve the existing safety and operation of the corridor, to relieve congestion, to provide greater capacity, to improve air quality, and to minimize environmental and other potential impacts.

### Corridor Planning Status

At the last meeting of the U.S. 12 Corridor Advisory Panel on October 9, 1991, existing conditions and concerns were presented to the panel. Since that meeting, the SRA study of U.S. 12 has been suspended temporarily, pending input from the study by the Corridor Planning Council regarding FAP 342. It is anticipated that the study will resume shortly, at which time the second advisory panel meeting will be scheduled and panel members will be notified. At this second panel meeting, alternative improvements under consideration will be presented and discussed.

.....  
**SRA SPOTLIGHT**  
.....

**Publisher:**  
The Illinois Department of Transportation

**Editor:**  
**CHMILL**

**For:**  
The Strategic Regional Arterials Plan  
**Advisory Panel**

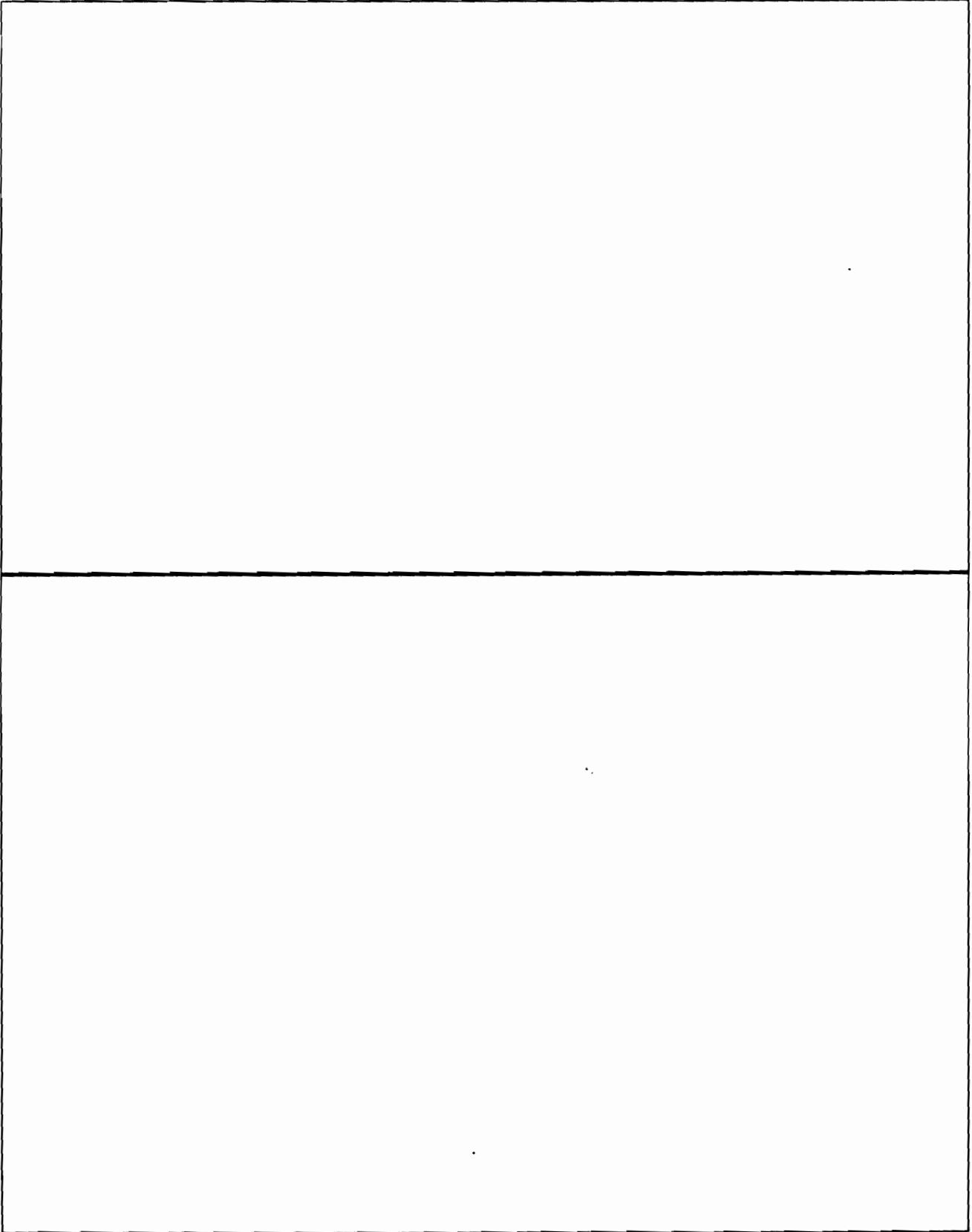
**Coordinator:**  
Mark Schmidt  
Lake County Division of Transportation

**Panel Members:**  
Deer Park - James M. Peterson, President  
Fox Lake - Francis A. Meier, President  
Hawthorn Woods - Glen H. Grieshaber, President  
Kildeer - George L. Welch, President  
Lakemoor - Charles E. Godt, President  
Lake Zurich - James W. Kay, Mayor  
North Barrington - Walter R. Clarke, Jr., President  
Spring Grove - John Toler, Mayor  
Wauconda - James P. Keagle, Sr., Mayor  
Lake County - Martin G. Buehler, Director of  
Transportation  
McHenry County - James R. Rakow, Superintendent  
of Highways



---

**SRA NEWSLETTER NO. 5**



# SRA SPOTLIGHT

U.S. 12 CORRIDOR ADVISORY PANEL

## Environmental Considerations in SRA Transportation Improvement Planning

### Discussion of Issues

In planning and implementation of roadway design projects, engineers and officials frequently face environmental considerations that complicate the projects' standard engineering aspects. Environmental considerations play a significant part in engineering design decisions, as highway designers and planners deal with the stringent requirements of various environmental regulatory agencies, and state and local governments (see table on page 2). Typical roadway design environmental issues include air quality, wetlands, and impacts to both sensitive land uses and to publicly-owned land (socioeconomic impact and potential land use change to the area also are considered, as discussed in Newsletter No. 4). Plans to avoid, minimize, or mitigate such impacts are integral to the design of a project and, ultimately, affect engineering solutions.

As part of the SRA project, an environmental analysis component has been conducted to inventory existing conditions and to identify environmental and land use characteristics that may conflict with, or be affected by, proposed roadway improvements. This initial inventory and identification would be supplemented by detailed analysis of these environmental effects as individual projects proceed to more advanced design. This newsletter reviews notable environmental and land use issues typically encountered in transportation projects, and discusses how they impact design decisions.

### Wetlands

Wetlands are areas that are inundated or saturated by surface or groundwater, and support a variety of plant and animal species adapted to these conditions.

Wetlands generally include swamps, marshes, bogs, and similar areas, and:

- Filter pollutants naturally;
- Enhance water quality;
- Provide natural watershed storage;
- Control flooding;
- Reduce erosion;
- Provide habitat for bird and animal life; and
- Provide aesthetic, recreational, educational, and socioeconomic benefits.

Because of these values, wetlands are protected by a variety of regulations at the local, state, and federal levels. Provisions for wetland protection, restoration, or replacement often are required before a project can proceed.

The presence of wetlands in the vicinity of road improvements influences location and design decisions. If possible, the project must *avoid* damage to wetlands. If avoidance is impractical, the project then must attempt to *minimize* adverse environmental impacts. Lastly, if wetland losses are unavoidable, the project's owner must arrange to *compensate* for destroyed or degraded wetlands through a process of restoring damaged wetlands or creating new ones.

### Parkland

Public parkland is protected by federal regulatory provisions, and special effort must be made to preserve and protect such lands. These provisions apply to public recreation areas, including forest preserves; conservation districts; publicly-owned golf courses; state, county, or local parks; and sites and structures listed in the National Register of Historic Places.

Projects that would acquire or adversely affect public recreation land require additional federal

... continued on page 3

**Federal Legislation for Resource Protection**

<b>Legislation</b>	<b>Resource Affected</b>	<b>Responsible Agency</b>	<b>Summary</b>
<i>Section 4(f) Evaluation</i>	Public park and recreation land; historic resources	Federal Highway Administration	Requires consideration, consultation, and alternative studies to determine that there are no feasible and prudent alternatives to the use of land from a publicly-owned park, recreation area, or wildlife and waterfowl refuge of significance, as determined by the official officer having jurisdiction. Also must address measures to minimize harm. Applies to properties eligible for the National Register of Historic Places.
<i>Section 6(f) of the Land and Water Conservation (LAWCON) Act</i>	Public recreation land developed with LAWCON funding	Federal Highway Administration	Recreation land purchased or improved under the LAWCON Act cannot be used unless replacement land of equal value, use, and size can be supplied. Precedes completion of the Section 4(f) Evaluation.
<i>Section 106 of the Historic Preservation Act</i>	Cultural resources	Advisory Council on Historic Preservation	Requires evaluation of the proposed project's effect on properties included, or eligible for inclusion, in the National Register of Historic Places, and allows the Advisory Council a reasonable opportunity to comment prior to project approval. Requires documentation of special effort to avoid or to minimize harm to any landmark that may be affected adversely. Precedes completion of the Section 4(f) Evaluation.
<i>Section 404 of the Clean Water Act</i>	Waterways and wetlands	U.S. Army Corps of Engineers and U.S. EPA	Requires permit for discharge of dredged or fill materials into jurisdictional waters of the United States, including wetlands. These waters include navigable waters and their tributaries, interstate waters, lakes, and intermittent streams.
<i>Wetlands Executive Order 11990</i>	Wetlands	Federal Highway Administration	Directs federal agencies to avoid unnecessary alteration or destruction of wetlands, and requires implementation of actions to minimize the loss or degradation of wetlands affected by a federal project, or by any project that receives federal funding.

*continued from page 1 . . .*

regulatory review and approval, and must include all possible measures to minimize harm. These measures might include replacement of lands, replacement of facilities impacted by the project, restoration of disturbed areas, incorporation of design features to minimize or avoid impact, or monetary compensation.

### *Sensitive Land Uses*

Sensitive land uses also are a factor in road improvement and design decisions. Typical sensitive land uses include hospitals, schools, cemeteries, police and fire departments, and other community facilities. Emergency access is one consideration; roadway changes can impact access to and from facilities such as hospitals and police and fire departments. Noise standards (moving a roadway closer to buildings may exceed acceptable noise levels) and business and residential relocation issues are other factors to be considered. Finally, effort should be made to avoid impact to these sensitive facilities because they are integral to the physical and social fabric of the community. Whenever possible, adjustments in road design should be made to avoid disrupting such facilities.

### *Air Quality*

Improved traffic operations produce an important benefit: reduced fuel consumption and a resultant air quality improvement. Vehicles traveling smoothly emit less pollutants than vehicles under congested flow conditions. In the Chicago metropolitan area, which has been designated a "severe non-attainment area" for air quality, maintaining smooth, efficient traffic operations is critical. Motor vehicles contribute as much as 60 percent of ozone-forming pollutants—a significant component of the smog that occurs on hot days. Pollutant emissions pose a particular problem in areas of congestion; high emissions result from frequent stops, long periods of vehicle idling, and very low speeds. More efficient traffic flow on the SRA network, therefore, will help the Chicago area to meet its clean air objectives.

## How Do These Environmental Considerations Affect Roadway Design?

Each of these environmental considerations contributes to the basic SRA improvement concept and affects design solutions. Engineering design is tailored to avoid or minimize effects by:

- Adjusting the alignment (e.g., focus widening to one side of the facility or the other; realign the roadway to avoid an impact)
- Incorporating retaining walls to minimize the amount of right-of-way needed
- Adjusting cross-sectional features, such as median width, to minimize the right-of-way needed
- Implementing curb-and-gutter and closed drainage systems to minimize right-of-way taking

In some cases, the presence and location of sensitive or protected land uses affect the basic SRA corridor concept. In keeping with overall planning objectives, the ability to implement a full, desirable SRA cross section must be balanced against the environmental impacts that could result. Decisions to "downsize" a corridor segment because of environmental concerns have been made on many SRA corridors.

## Environmental Concerns and SRA Planning for U.S. 12

The study to determine recommended improvements for U.S. 12 will consider numerous environmental issues, including wetlands, parkland, forest preserves, sensitive land uses, and potentially historic properties. Alternatives will attempt to avoid, or to minimize and/or mitigate, effects to these and other environmental concerns along the U.S. 12 corridor.

North of Spring Grove, the proximity of wetlands and floodplains to the U.S. 12 corridor create environmental concerns. Numerous wetlands exist in the vicinity of Nippersink Creek, south of Illinois 31 and south of North Solon Road. North of Fox River,

---

## U.S. 12 Corridor

---

there are a number of wetland locations, as well as the McHenry County Conservation District. The Fox River, Nippersink Lake, and Pistakee Lake will affect the development of viable alternatives. The proximity of existing land uses and local businesses through the commercial areas of Fox Lake also will affect alternatives.

South of Fox Lake to Lake Zurich, environmental concerns are associated primarily with wetlands at spot locations along both sides of the corridor. Other potentially sensitive land uses include the Big Hollow School at the intersection of Illinois 134, the Mount St. Joseph's Community Children's Home, and the Wynstone Golf Community north of Miller Road.

South of Lake Zurich to Lake Cook Road, a number of wetlands are adjacent to both sides of the corridor. South of Lake Cook Road, the dense commercial areas between Dundee Road and Elmhurst Road and their proximity to U.S. 12 limit available right-of-way. Other sensitive land uses between Illinois 53 and Golf Road that may impact the development of alternatives include the Randhill Park Cemetery in the northeast quadrant of the Illinois 53/U.S. 12 intersection, the Rolling Green and Old Orchard Country Clubs at Euclid Avenue, and the Cook County Forest Preserve property at Golf Road.

These environmental concerns will have a direct effect on the alternative development process.

### Corridor Status

The U.S. 12 corridor advisory panel last met on October 1, 1991. Since that meeting, at which existing conditions and concerns were presented to the panel, the SRA study of U.S. 12 has been temporarily on hold. In the past month, the study has restarted, and we anticipate scheduling the second advisory panel meeting in the late fall. Panel members will be notified of the date, time, and location in advance of the panel meeting. At the second advisory meeting, alternatives under consideration will be presented and discussed.

.....  
**SRA SPOTLIGHT**  
.....

**Publisher:**  
The Illinois Department of Transportation

**Editor:**  
**CEMHILL**

**For:**  
The Strategic Regional Arterials Plan

**Advisory Panel**

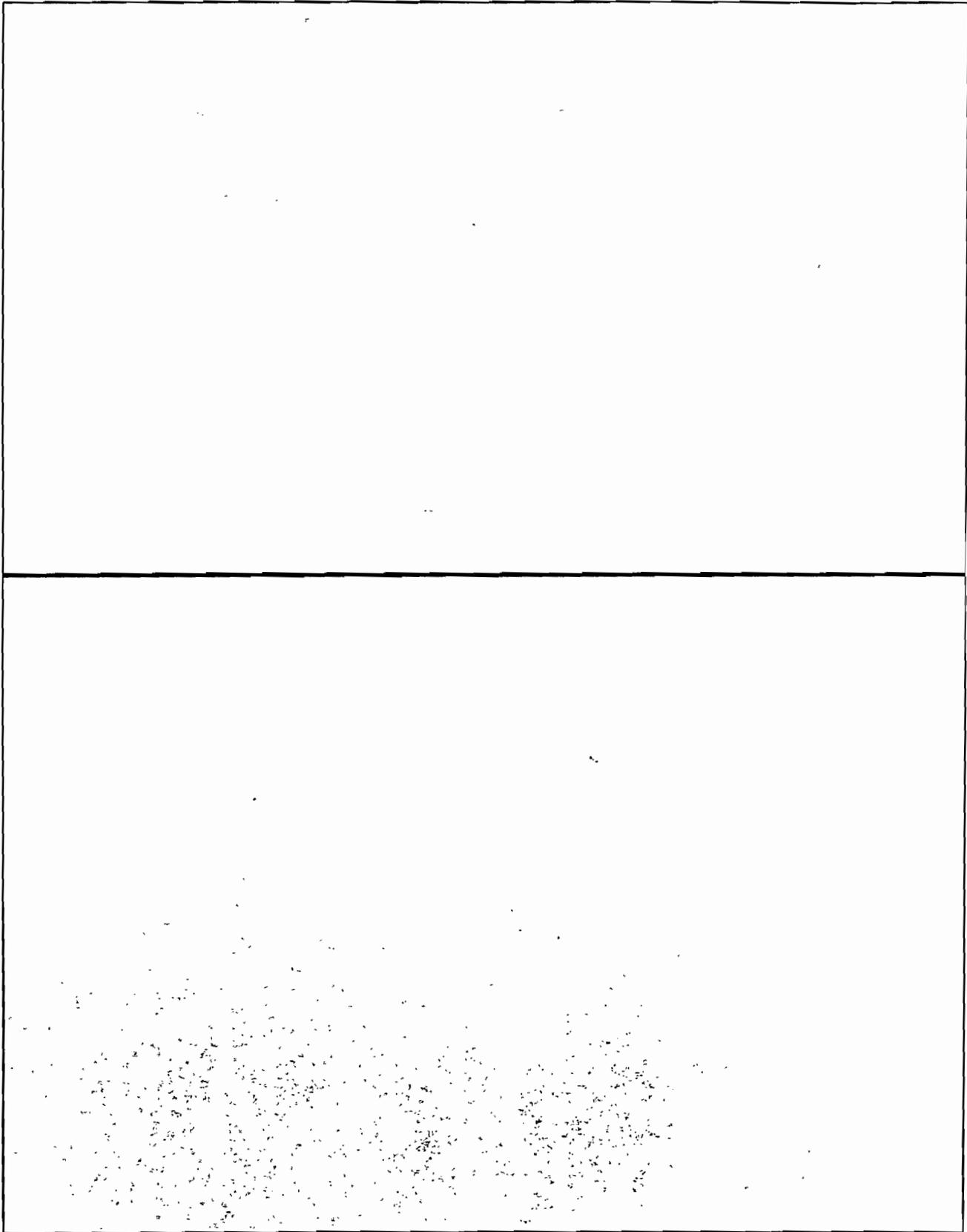
**Coordinator:**  
David Seglin  
Northwest Municipal Conference

**Panel Members:**  
Arlington Heights - William O. Maki, President  
Des Plaines - D. Michael Albrecht, Mayor  
Mt. Prospect - Gerald L. (Skip) Farley, President  
Palatine - Gregory Solberg, Trustee  
Prospect Heights - Edward Rotchford, Mayor



---

# SRA NEWSLETTER NO. 6



# SRA SPOTLIGHT

U.S. 12 CORRIDOR ADVISORY PANEL

## Environmental Considerations in SRA Transportation Improvement Planning

### Discussion of Issues

In planning and implementation of roadway design projects, engineers and officials frequently face environmental considerations that complicate the projects' standard engineering aspects. Environmental considerations play a significant part in engineering design decisions, as highway designers and planners deal with the stringent requirements of various environmental regulatory agencies, and state and local governments (see table on page 2). Typical roadway design environmental issues include air quality, wetlands, and impacts to both sensitive land uses and to publicly-owned land (socioeconomic impact and potential land use change to the area also are considered, as discussed in Newsletter No. 4). Plans to avoid, minimize, or mitigate such impacts are integral to the design of a project and, ultimately, affect engineering solutions.

As part of the SRA project, an environmental analysis component has been conducted to inventory existing conditions and to identify environmental and land use characteristics that may conflict with, or be affected by, proposed roadway improvements. This initial inventory and identification would be supplemented by detailed analysis of these environmental effects as individual projects proceed to more advanced design. This newsletter reviews notable environmental and land use issues typically encountered in transportation projects, and discusses how they impact design decisions.

### Wetlands

Wetlands are areas that are inundated or saturated by surface or groundwater, and support a variety of plant and animal species adapted to these conditions.

Wetlands generally include swamps, marshes, bogs, and similar areas, and:

- Filter pollutants naturally;
- Enhance water quality;
- Provide natural watershed storage;
- Control flooding;
- Reduce erosion;
- Provide habitat for bird and animal life; and
- Provide aesthetic, recreational, educational, and socioeconomic benefits.

Because of these values, wetlands are protected by a variety of regulations at the local, state, and federal levels. Provisions for wetland protection, restoration, or replacement often are required before a project can proceed.

The presence of wetlands in the vicinity of road improvements influences location and design decisions. If possible, the project must *avoid* damage to wetlands. If avoidance is impractical, the project then must attempt to *minimize* adverse environmental impacts. Lastly, if wetland losses are unavoidable, the project's owner must arrange to *compensate* for destroyed or degraded wetlands through a process of restoring damaged wetlands or creating new ones.

### Parkland

Public parkland is protected by federal regulatory provisions, and special effort must be made to preserve and protect such lands. These provisions apply to public recreation areas, including forest preserves; conservation districts; publicly-owned golf courses; state, county, or local parks; and sites and structures listed in the National Register of Historic Places.

Projects that would acquire or adversely affect public recreation land require additional federal

... continued on page 3

**Federal Legislation for Resource Protection**

<b>Legislation</b>	<b>Resource Affected</b>	<b>Responsible Agency</b>	<b>Summary</b>
<i>Section 4(f) Evaluation</i>	Public park and recreation land; historic resources	Federal Highway Administration	Requires consideration, consultation, and alternative studies to determine that there are no feasible and prudent alternatives to the use of land from a publicly-owned park, recreation area, or wildlife and waterfowl refuge of significance, as determined by the official officer having jurisdiction. Also must address measures to minimize harm. Applies to properties eligible for the National Register of Historic Places.
<i>Section 6(f) of the Land and Water Conservation (LAWCON) Act</i>	Public recreation land developed with LAWCON funding	Federal Highway Administration	Recreation land purchased or improved under the LAWCON Act cannot be used unless replacement land of equal value, use, and size can be supplied. Precedes completion of the Section 4(f) Evaluation.
<i>Section 106 of the Historic Preservation Act</i>	Cultural resources	Advisory Council on Historic Preservation	Requires evaluation of the proposed project's effect on properties included, or eligible for inclusion, in the National Register of Historic Places, and allows the Advisory Council a reasonable opportunity to comment prior to project approval. Requires documentation of special effort to avoid or to minimize harm to any landmark that may be affected adversely. Precedes completion of the Section 4(f) Evaluation.
<i>Section 404 of the Clean Water Act</i>	Waterways and wetlands	U.S. Army Corps of Engineers and U.S. EPA	Requires permit for discharge of dredged or fill materials into jurisdictional waters of the United States, including wetlands. These waters include navigable waters and their tributaries, interstate waters, lakes, and intermittent streams.
<i>Wetlands Executive Order 11990</i>	Wetlands	Federal Highway Administration	Directs federal agencies to avoid unnecessary alteration or destruction of wetlands, and requires implementation of actions to minimize the loss or degradation of wetlands affected by a federal project, or by any project that receives federal funding.

*continued from page 1 . . .*

regulatory review and approval, and must include all possible measures to minimize harm. These measures might include replacement of lands, replacement of facilities impacted by the project, restoration of disturbed areas, incorporation of design features to minimize or avoid impact, or monetary compensation.

### *Sensitive Land Uses*

Sensitive land uses also are a factor in road improvement and design decisions. Typical sensitive land uses include hospitals, schools, cemeteries, police and fire departments, and other community facilities. Emergency access is one consideration; roadway changes can impact access to and from facilities such as hospitals and police and fire departments. Noise standards (moving a roadway closer to buildings may exceed acceptable noise levels) and business and residential relocation issues are other factors to be considered. Finally, effort should be made to avoid impact to these sensitive facilities because they are integral to the physical and social fabric of the community. Whenever possible, adjustments in road design should be made to avoid disrupting such facilities.

### *Air Quality*

Improved traffic operations produce an important benefit: reduced fuel consumption and a resultant air quality improvement. Vehicles traveling smoothly emit less pollutants than vehicles under congested flow conditions. In the Chicago metropolitan area, which has been designated a "severe non-attainment area" for air quality, maintaining smooth, efficient traffic operations is critical. Motor vehicles contribute as much as 60 percent of ozone-forming pollutants—a significant component of the smog that occurs on hot days. Pollutant emissions pose a particular problem in areas of congestion; high emissions result from frequent stops, long periods of vehicle idling, and very low speeds. More efficient traffic flow on the SRA network, therefore, will help the Chicago area to meet its clean air objectives.

## How Do These Environmental Considerations Affect Roadway Design?

Each of these environmental considerations contributes to the basic SRA improvement concept and affects design solutions. Engineering design is tailored to avoid or minimize effects by:

- Adjusting the alignment (e.g., focus widening to one side of the facility or the other; realign the roadway to avoid an impact)
- Incorporating retaining walls to minimize the amount of right-of-way needed
- Adjusting cross-sectional features, such as median width, to minimize the right-of-way needed
- Implementing curb-and-gutter and closed drainage systems to minimize right-of-way taking

In some cases, the presence and location of sensitive or protected land uses affect the basic SRA corridor concept. In keeping with overall planning objectives, the ability to implement a full, desirable SRA cross section must be balanced against the environmental impacts that could result. Decisions to "downsize" a corridor segment because of environmental concerns have been made on many SRA corridors.

## Environmental Concerns and SRA Planning for U.S. 12

The study to determine recommended improvements for U.S. 12 will consider numerous environmental issues, including wetlands, parkland, forest preserves, sensitive land uses, and potentially historic properties. Alternatives will attempt to avoid, or to minimize and/or mitigate, effects to these and other environmental concerns along the U.S. 12 corridor.

North of Spring Grove, the proximity of wetlands and floodplains to the U.S. 12 corridor create environmental concerns. Numerous wetlands exist in the vicinity of Nippersink Creek, south of Illinois 31 and south of North Solon Road. North of Fox River,

---

## U.S. 12 Corridor

---

there are a number of wetland locations, as well as the McHenry County Conservation District. The Fox River, Nippersink Lake, and Pistakee Lake will affect the development of viable alternatives. The proximity of existing land uses and local businesses through the commercial areas of Fox Lake also will affect alternatives.

South of Fox Lake to Lake Zurich, environmental concerns are associated primarily with wetlands at spot locations along both sides of the corridor. Other potentially sensitive land uses include the Big Hollow School at the intersection of Illinois 134, the Mount St. Joseph's Community Children's Home, and the Wynstone Golf Community north of Miller Road.

South of Lake Zurich to Lake Cook Road, a number of wetlands are adjacent to both sides of the corridor. South of Lake Cook Road, the dense commercial areas between Dundee Road and Elmhurst Road and their proximity to U.S. 12 limit available right-of-way. Other sensitive land uses between Illinois 53 and Golf Road that may impact the development of alternatives include the Randhill Park Cemetery in the northeast quadrant of the Illinois 53/U.S. 12 intersection, the Rolling Green and Old Orchard Country Clubs at Euclid Avenue, and the Cook County Forest Preserve property at Golf Road.

These environmental concerns will have a direct effect on the alternative development process.

### Corridor Status

The U.S. 12 corridor advisory panel last met on October 9, 1991. Since that meeting, at which existing conditions and concerns were presented to the panel, the SRA study of U.S. 12 has been temporarily on hold. In the past month, the study has restarted, and we anticipate scheduling the second advisory panel meeting in the late fall. Panel members will be notified of the date, time, and location in advance of the panel meeting. At the second advisory meeting, alternatives under consideration will be presented and discussed.

---

### SRA SPOTLIGHT

---

**Publisher:**

The Illinois Department of Transportation

**Editor:**

**CHM HILL**

**For:**

The Strategic Regional Arterials Plan

**Advisory Panel**

**Coordinator:**

Mark Schmidt

Lake County Division of Transportation

**Panel Members:**

Deer Park - James M. Peterson, President

Fox Lake - Francis A. Meier, President

Hawthorn Woods - Glen H. Grieshaber, President

Kildeer - George L. Welch, President

Lakemoor - Charles E. Godt, President

Lake Zurich - James W. Kay, Mayor

North Barrington - Walter R. Clarke, Jr., President

Spring Grove - John Toler, Mayor

Wauconda - James P. Keagle, Sr., Mayor

Lake County - Martin G. Buehler, Director of

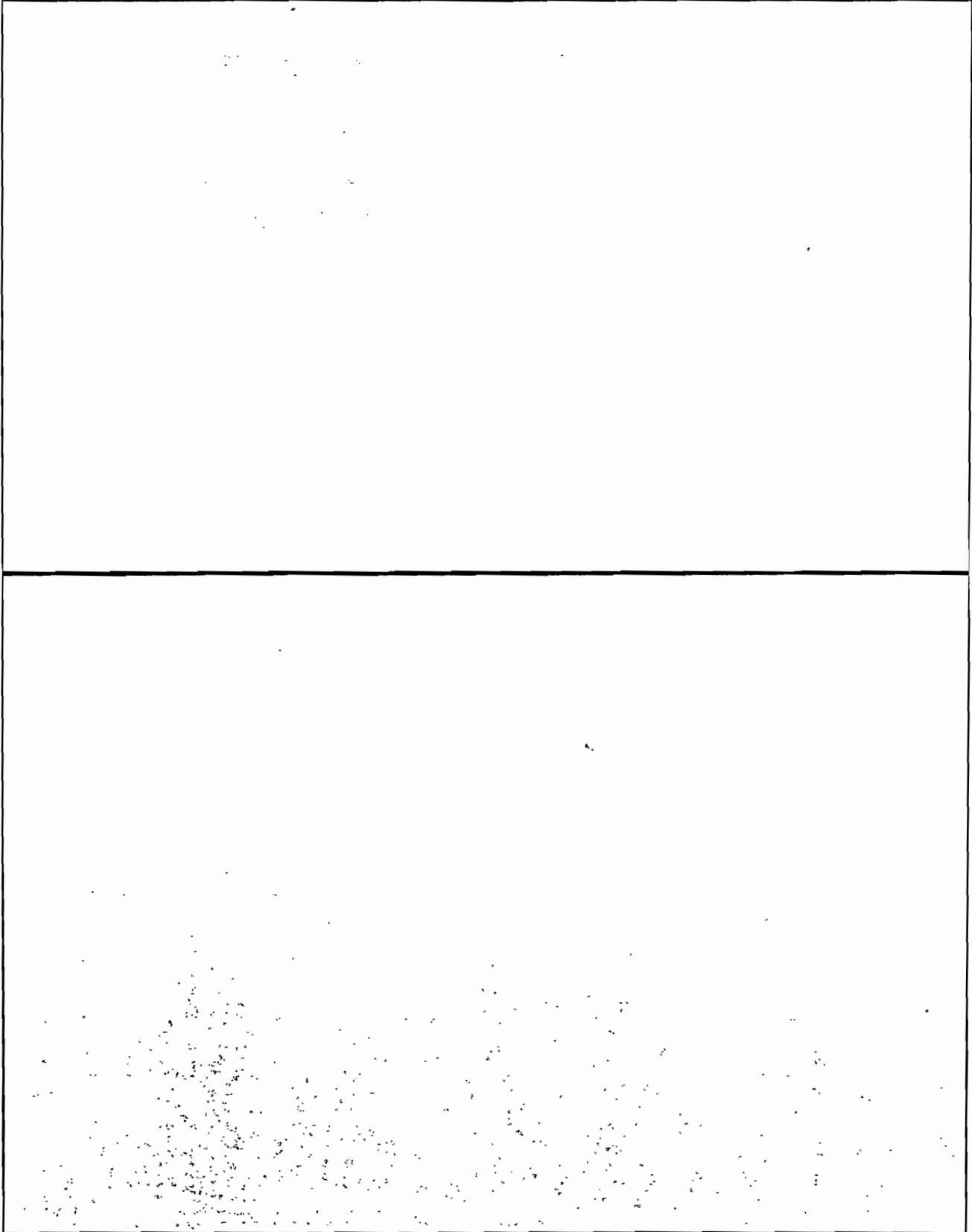
Transportation

McHenry County - James R. Rakow, Superintendent  
of Highways



---

## SRA NEWSLETTER NO. 6



**Public Hearing Comments,  
Questions, and Responses**

**TO:** Illinois Department of Transportation

**COPIES:** Rich Starr/IDOT  
Tim Neuman/CH2M HILL

**FROM:** Dick Stafford/CH2M HILL

**DATE:** September 8, 1994

**SUBJECT:** U.S. 12 (Rand Road) SRA Public Hearing

**PROJECT:** CHI31495.02.A5

This memorandum summarizes written and oral comments taken by IDOT, the consultant team staff, and the court reporter at the three public hearings for the U.S. 12 (Rand Road) SRA held on October 27, 1993; November 2, 1993; and November 4, 1993. Responses to the comments are in bold type following the appropriate comments.

**Mayor Kenneth Hamsher-Village of Fox Lake**

Requested a meeting with the project team to discuss the intersection of Oak Street and U.S. 12 and the intersection of Kings Drive and U.S. 12.

**A meeting was held with Village staff to discuss alternatives at these two locations. It was agreed that the alternatives shown would be retained as potential solutions at the Oak Street intersection and that these alternatives would be considered in conjunction with the redevelopment in the area. It was also agreed that the relocated Oak Street intersection could be spaced no closer than 850 feet from the Grand Avenue intersection.**

**Ms. Beth Penesis-Village of Long Grove**

South of Bonner Road the Village would be in favor of urban overpasses at intersections to avoid signals. The Village would be in favor of the use of more frontage roads to minimize access to U.S. 12. The biggest concern expressed is that the "SRA process has been around for about 15 years or more." What is it going to take to make this a priority?

**South of Bonner Road the proposed SRA plan recommends retaining the interchanges at Illinois 176 and Illinois 59. Urban interchanges (urban overpasses) are considered impractical due to their significant impacts. Interchanges are not warranted at most existing signalized locations south of Illinois 59. We agree that frontage roads are a desirable feature of the SRA**

# MEMORANDUM

Page 2

September 8, 1994

system. They do, however, require additional right-of-way to implement and can result in significant impacts to existing land use. Frontage roads have been recommended at select locations along U.S. 12 to reduce the number of access points to U.S. 12. Additional frontage roads may be added to U.S. 12 as the plan develops and ultimately becomes implemented. The Strategic Regional Arterial system was established in 1990. Certain projects will be identified as priorities as the plan develops.

## Mark L. Schoeffmann, P.E.-Director of Engineering, Village of Arlington Heights

A summary of comments made by the Village of Arlington Heights and the responses to these comments are attached to the back of this memorandum.

## Jeffrey A. Wullbecker, P.E.-Village of Mount Prospect

The Village of Mount Prospect had the following comments with respect to the SRA Proposed Plan:

The SRA planning objectives should take into consideration short trips in the U.S. 12 corridor.

**The development of the SRA plan must take into account not only the principal SRA objectives, as discussed in the SRA Design Concept Report, but the unique character of land use that the arterial is intended to serve. Development of the U.S. 12 SRA plan attempted to balance the objectives of carrying long-range, regional through traffic while reasonably accommodating local trips within the corridor.**

Barrier medians will eliminate left-turn access into and out of properties and side streets and will cause an inconvenience to residents and business owners.

**In areas where a barrier median is recommended as part of SRA improvements, but a flush or mountable median exists currently, the implementation of the barrier median will be undertaken in a manner that fully considers the needs of adjacent businesses to maintain access onto and off of the SRA route.**

**By establishing the ultimate goal of implementing a barrier median to improve both safety and through travel service in this long range planning study, it is intended that in areas where there is development or redevelopment potential, alternative access improvements such as combined**

## MEMORANDUM

Page 3

September 8, 1994

**entrances, interconnected parking lots, frontage roads or new access off of side streets will be a part of those plans.**

**The raised median will partially restrict access to local businesses and potentially some side streets. The plan does not eliminate all access to any business. Future studies will determine where left-turn-in/no-left-turn-out access can be provided. Furthermore, special intersection designs would be recommended to safely accommodate U-turns.**

Traffic will be forced into neighborhoods to make the necessary left turns and to avoid traffic signals.

**By developing an arterial plan that takes into account the need for access management, arterial operation and capacity will improve as well as safety. By providing adequate operations along U.S. 12, it is less likely that U.S. 12 traffic will divert to the local street system. Conversely, if U.S. 12 is not improved it would be reasonable to expect some U.S. 12 traffic using the neighborhood streets to make a portion of the trip.**

Traffic will increase at the most congested intersections as drivers circulate to get into position to access properties via right turns only.

**Turning traffic may indeed increase at some intersections as a result of U-turns. Prior to implementation of the raised median more detailed analysis of traffic circulation would be performed. Measures to ensure adequate operation would be investigated.**

Direct and easy access to properties during critical emergency responses will be restricted, increasing response time. The opportunity for emergency vehicles to travel in the oncoming lanes when necessary would be eliminated. Emergency vehicle trip routes and times will increase as they return to their stations.

**The intent of the SRA improvement plan is to provide a safer more efficient arterial for the general public. While access may be restricted to some land uses increase of emergency vehicle response time is not expected to be significant. Furthermore, it can be argued that improved arterial operation would provide better movement of emergency vehicles. In any event, it is not possible for this study to quantitatively analyze and evaluate emergency vehicle response times for all the SRA improvements.**

Will the Village have input in determining access points across the median?

# MEMORANDUM

Page 4

September 8, 1994

**When it becomes time to develop the arterial plan in greater detail (i.e., Phase I Design) IDOT would involve the local municipalities in reviewing the recommended locations for median breaks.**

Will IDOT provide the funding for development of frontage roads to improve private property access?

**In some cases IDOT may provide the funding for the development of access roads to help achieve the overall SRA objectives. Locations where frontage roads may be implemented would be evaluated on a case-by-case basis.**

Reconfiguration of the Rand Road/Elmhurst Road/Kensington intersection creates additional points of conflict, signalized intersections with turning movements, which may lead to an increase in accidents and the need for additional police officers.

**The intent of the SRA plan at the intersection of U.S. 12, Elmhurst Road, and Kensington Road is to improve the overall capacity, operation, and safety at this location. The existing condition focuses all traffic through a six-legged intersection triangle, while the proposed plan is designed to better distribute traffic through this intersection, through the use of local access roads and left turn restrictions. This should produce fewer conflicts at the intersection triangle, and thus should reduce total accident experience.**

Local businesses would be displaced by reconfiguration of this intersection.

**Construction of the local access roads would require some right-of-way acquisition. The extent of acquisition would be established during Phase I studies.**

Will the proposed traffic signal system significantly improve traffic?

**Eliminating critical left-turn movements at key intersections as well as reducing the magnitude of traffic traveling through the intersection triangle, in conjunction with a revised coordinated signal system, should improve the operation of U.S. 12 and its associated signalized intersections.**

The final design must prohibit cut-through traffic on Pine Street.

**Prohibiting cut-through traffic into Pine Street was identified early on as a key element in the design of this area. Channelization is shown on the intersection detail prohibiting cut-through traffic.**

# MEMORANDUM

Page 5

September 8, 1994

The Kensington-to-Rand bypass is located too close to an existing residential area.

**The access road bisects commercial land uses.**

Who will have jurisdiction over the bypass roads?

**This will be determined at a latter date through discussions with Village staff.**

Certain turning movements will require negotiating an inordinate amount of traffic signals.

**It is true that certain movements would require traveling through more signals in the proposed plan than in the existing condition. While certain traffic movements may experience increased delay, the plan will decrease overall system delay.**

The increased number of signalized intersections will significantly increase the cost of Opticom.

**While adding signals will increase the cost of Opticom, other system-wide benefits would result. Cost saving would be achieved from reduced intersection delays, improved air quality, and reduced accident experience.**

The Mt. Prospect Road segment between Central Road and Rand Road needs a long-term solution. Backups occur in the northbound lanes across Central Road.

**Through SRA improvements at the intersection of Central Road and U.S. 12 and ultimately through improved signal design, backups along Central Road should be reduced.**

The improvements will widen the pavement and thus increase storm water runoff. Storm water detention will be required to prevent an increase in the demand of the storm sewers.

**The increased runoff associated with the proposed improvements will be acknowledged in the SRA report. The need for detention and other drainage requirements will be confirmed during Phase I studies.**

MEMORANDUM

Page 6

September 8, 1994

**Gary J. Reschke, Village Planner-Village of Lake Zurich**

The Village of Lake Zurich has provided a list of potential locations where pedestrian activity requires consideration of pedestrian overpasses crossing U.S. 12. These locations include (1) North Lake Commons and Paulus Park, (2) Deerpath Road, and (3) Ela Road.

**The need and location for a pedestrian overpass will continue to be studied. As future studies (i.e. Phase D) are initiated the need and location for overpasses will be established. The Final U.S. 12 SRA Report will identify the need for consideration of pedestrian crossings.**

**Russell A. Johnson, President-Prairie Woods Audubon Society**

The Prairie Woods Audubon Society expressed desire for the protection of any wetlands along the proposed U.S. 12 corridor.

**Corridor improvements along U.S. 12 were developed in an effort to minimize impacts to wetlands. The exact delineation of wetland boundaries would be determined in subsequent studies. At that time refinement of the proposed improvement would take place to minimize impacts to surrounding wetlands.**

**Carroll Schaal, Principal Planner-Stormwater Management Commission**

The Storm Water Management Commission provided a list of some flooding and drainage problems adjacent to the right-of-way and potential opportunities for off-site detention.

**This information will be retained for future use when refining the proposed corridor plan.**

**Joseph Freed and Associates**

Regarding Northpoint Shopping Center:

1) Right-of-way acquisition would eliminate established and city required landscaping and result in parking space losses. The developer stated they would oppose any ROW acquisition.

**Estimated right-of-way acquisition in this area amounts to approximately 5 feet from each side of U.S 12, except at intersections where right-of-way acquisition is greater due to channelization requirements. An investigation, an evaluation, and potential mitigation measures of impacts (i.e., parking**

**MEMORANDUM**

Page 7

September 8, 1994

**requirements, landscaping, etc.) realized from minor right-of-way acquisition would be addressed in Phase I studies.**

2) The existing right-in/right-out access for the Jewel Food Store is absolutely vital to the center's operation. The developer requests that this entrance remain as an access point.

**Access at this location can be maintained as right-in/right-out only.**

3) The driveways at the northeast corner of Arlington Heights Road and Rand Road servicing the Mobil station should remain as access points for this parcel.

**Access points at this location would be restricted to right-in/right-out only. The proximity of the intersection to this land use as well as the need for adequate channelization preclude the ability to provide left-turn access or egress.**

4) The developer agrees with the plan to maintain full signalized access at the commercial entrance as shown on the proposed plan.

**No comment required.**

Regarding Southpoint Shopping Center:

1) The developer agrees with the plan to maintain two signalized access points at Margaret and Dorothy Avenues.

**No comment required.**

2) The developer stated that the right-of-way acquisition would eliminate established and city-required landscaping and also result in the loss of parking spaces and that they were opposed to any right-of-way acquisition along U.S. 12.

**Estimated right-of-way acquisition in this area amounts to approximately 5 feet from each side of U.S 12, except at intersections where right-of-way acquisition is greater due to channelization requirements. An investigation, an evaluation, and potential mitigation measures of impacts (i.e., parking requirements, landscaping, etc.) realized from minor right-of-way acquisition would be addressed in Phase I studies.**

Regarding Randhurst Commons Shopping Center:

## MEMORANDUM

Page 8

September 8, 1994

1) The developer stated that the closing of one full-access point and the reduction from full-access to a right-in/right-out entrance along U.S. 12 will impact the property. A request was made that the northernmost access point remain a full-access point and the southern access point changed to a right-in/right-out access point.

**At this location the proximity of the closely spaced intersections of Illinois 83 (Elmhurst Road) and Kensington make it essential to control existing access in order to improve the operation of U.S. 12 in this area. Right-in/right-out access would be permitted if no other suitable access to the property can be developed.**

2) The impact of the U.S. 12 improvements to the center's access can be lessened by permitting an access drive to the new circulation road north of the Illinois 83/U.S. 12 intersection. The developer stated that this road would benefit the area's traffic circulation and requested that the road be designed to allow direct access to it from the center.

**Prior to implementation of the improvement scheme shown at this location a traffic circulation study would need to be performed. This study would identify the appropriate locations for future access.**

3) The developer stated that the right-of-way acquisition would result in lost parking and that it opposes any right-of-way acquisition along U.S. 12.

**Estimated right-of-way acquisition in this area amounts to approximately 5 feet from each side of U.S. 12, except at intersections where right-of-way acquisition is greater due to channelization requirements. An investigation, an evaluation, and potential mitigation measures of impacts (i.e., parking requirements, landscaping, etc.) realized from minor right-of-way acquisition would be addressed in Phase I studies.**

### Other Comments Made by the General Public

The president of the Glenrich Association was concerned about access to the subdivision (44 homes) in the vicinity of Kuhn Road.

**The plan recommends that full access be permitted at the entrance to the subdivision with the existing traffic control retained. A signalized intersection does not appear warranted at this time. If signal warrants are met in the future a signal will be considered. The spacing of the signal at Illinois 31 to this location would meet SRA signal spacing criteria.**

# MEMORANDUM

Page 9

September 8, 1994

Why does the study of U.S. 12 end at the intersection of Illinois 31? What is going to happen to traffic north of the Illinois 31 and U.S. 12 intersection?

**The extension of U.S. 12 around Richmond has been under ongoing study. Bypass alignments have been studied that would extend U.S. 12 from Illinois 31 to U.S. 12 in Wisconsin. Due to a number of environmental concerns a specific alignment has not yet been selected. The development of an alignment around Richmond is now in the jurisdiction of the Illinois State Toll Highway Authority. Therefore, for SRA planning purposes it was determined to terminate the SRA study of U.S. 12 at Illinois 31.**

The president of the Richmond Merchants Association stated that there should be a signal at the intersection of Broadway and U.S. 12.

**The proposed plan recommendations for this SRA study of U.S. 12 terminate at Illinois 31. The study did not extend north into Richmond.**

Mr. Dean Cunat stated that he would be willing to donate right-of-way he owns to assist in the development of the access roads in the Spring Grove area.

**No comment required.**

The information provided at the public hearing indicates no consideration of current traffic flows, improved signal coordination, environmental impacts of adjoining property owners, or the "ultimate logic to expand a road which currently had no appropriate terminus."

**The SRA plan does consider the current operation of traffic flows. Furthermore, a recommendation of the SRA plan is improved signal coordination, progression of U.S. 12 through traffic, and intersection improvements to enhance traffic flow. Environmental impacts such as air quality and noise will be investigated as part of the Phase I study process.**

Concern was expressed over the source of funding for the SRA improvements.

**No funding has been established for the SRA improvements.**

There were two comments objecting to the expansion of U.S. 12 to three lanes in each direction because of the potential for more traffic.

**M E M O R A N D U M**

Page 10

September 8, 1994

**As a result of existing and future growth in Lake and McHenry Counties traffic growth in the U.S. 12 corridor as well as other corridors will increase regardless of the expanded cross section. The plan was not developed in an effort to attract additional traffic. The plan was developed to be implemented as part of the Year 2010 Transportation Plan that would include other roadway projects intended to carry future traffic growth. In addition, other roadway projects such as the Illinois 53 extension and widening of the Tri-state tollway would be included as part of the long-range transportation plan in this region.**

Comments were made stating that the proposed plan would increase speeds.

**The proposed plan does not recommend increasing any existing speed limits.**

Concern was expressed over access to a parcel of developable land fronting U.S. 12 on the east between Case Road and Callahan Road. Currently, full access exists south of Case Road. If full access is prohibited at the point just south of Case Road, who is the appropriate person to contact to obtain information?

**The plan recommends full access points be developed at Case Road and Callahan Road via signalized intersections. Case Road is shown as a "T" intersection with no access to the east. Case Road could be extended to provide future access to the developing properties to the east. The plan does recommend removing the median crossover south of Case Road. This access point would be restricted to right-in/right-out turns only. Full access is restricted at this location due to the close proximity of this access point to the signal at Case Road. The appropriate person to contact to be kept apprised of this situation would be the Illinois Department of Transportation District No. 1 Engineer, located in Schaumburg, Illinois.**

A comment was made suggesting an urban interchange at Miller Road and U.S. 12.

**Construction of an urban interchange is not warranted at this location. Traffic volumes and anticipated future operation at this location can be effectively accommodated via a conventional at-grade intersection. Providing improved intersection channelization and capacity improvements will significantly improve the operation of this intersection. Furthermore, implementation would have significant impacts on access to local land uses and the displacement of existing properties.**

## MEMORANDUM

Page 11

September 8, 1994

A comment was made encouraging the use of frontage roads along U.S. 12 to decrease the number of access points to U.S. 12 and improve safety.

**Frontage roads are recommended at a number of locations along U.S. 12. Typically, they were located at locations where there was a high number of closely spaced access points along U.S. 12. The plan does not intend to preclude adding frontage roads at other locations where they are not currently shown. Frontage roads are desirable features to control access and will be implemented where possible and where appropriate.**

A concern was expressed over a 40-acre farm abutting both sides of U.S. 12 and the ability to maintain access to it.

**Access to properties along U.S. 12 would be provided in some form, either through restricted access to/from U.S. 12 (i.e. right-in/right-out only) or through access off a local road. The locations for full access points are restricted to signalized intersections. If access cannot be provided, the property would be acquired. A further evaluation of access locations would be investigated in Phase I Design Studies.**

Six comments were recorded stating the concern that the U.S. 12 proposed plan would take the place of the Illinois 53 extension, or that the plan should not be implemented until the Illinois 53 extension is in place.

**The U.S. 12 proposed SRA plan would be needed even if the Illinois 53 extension is constructed. The implementation of the U.S. 12 SRA plan will be developed in conjunction with the Year 2010 Transportation Plan. In addition, the plan would rely on other transportation improvements, such as the extension of Illinois 53 and expansion of the Tri-state tollway, to share in carrying the traffic demand anticipated in the future.**

Two comments were made stating that the SRA improvements are not necessary.

**SRA planning focuses on solving long-term or future needs as well as existing problems. Recent growth trends and consensus about expected growth in travel activity suggest that a need will arise. The lack of a perceived need today is not a justification for failure to plan for the future.**

Five comments were made concerning the potential noise impacts resulting from the proposed U.S. 12 plan.

# MEMORANDUM

Page 12

September 8, 1994

**Noise impacts and noise levels would be evaluated as part of the Phase I study process. Furthermore, the appropriate location for noise attenuation and abatement, if required, would be evaluated.**

Three comments were recorded stating the support of the SRA plan.

**No comment required.**

Concern was expressed over removing the existing median opening north of McHenry Road at August Lane. This requires northbound traffic entering August Lane to travel to Lake Shore Drive to make a U-turn. The plan does not indicate adding a median opening between Lake Shore Drive and McHenry Road.

**The plan will be revised to provide an additional median opening for U-turns at a location between McHenry Road and Lake Shore Drive to provide access to August Lane.**

Five comments were recorded objecting to the full signalized intersection at Ivanhoe Road and U.S. 12 due to the potential for increased traffic along residential roads and/or increased "cut through" traffic.

**The plan will be revised to remove the proposed signal at U.S. 12 and Ivanhoe Road and to restrict access to right-in/right-out turns only. Full access to these areas can be reasonably accommodated at other locations including the interchange at Illinois 176 and the signalized intersection at Lake Shore Drive.**

A comment was made regarding adding a bicycle lane along Illinois 176 under U.S. 12 and parallel to U.S. 12.

**Improvements and changes to the operating characteristics of Illinois 176 were not considered as part of this study. Providing for a bicycle lane along U.S. 12 is not recommended.**

There should be consideration of maintaining the six-lane width in the commercial zoned areas and reducing the cross section in the residential areas.

**In order to obtain the operational effectiveness and capacity of a six-lane arterial, it is necessary to provide a continuous cross section. Transitioning from six lanes to four lanes to six lanes significantly inhibits the operation of the arterial by creating bottlenecks along the arterial.**

# MEMORANDUM

Page 13

September 8, 1994

Two comments were made suggesting that there should be more study of east-west roads to alleviate traffic along U.S. 12.

**There are a number of ongoing and future studies that will address traffic and operations of east-west facilities. These include the designated SRAs of Illinois 137, Illinois 120, Illinois 176, Illinois 60, Illinois 22, Palatine Road, and Illinois 58.**

There should be more studies to determine how this project will be developed, including how funds are to be appropriated, etc.

**The SRA study is only the first study in a series of engineering studies. Subsequent to this SRA study a Phase I study (defined as preliminary engineering) would be performed, and then there will be a Phase II study.**

Twelve comments were recorded opposing the SRA recommendation of a raised median because the median would limit access into the businesses along U.S. 12.

**In areas where a barrier median is recommended as part of SRA improvements, but a flush or mountable median exists currently, the implementation of the barrier median will be undertaken in a manner that fully considers the needs of adjacent businesses to maintain access onto and off of the SRA route.**

**By establishing the ultimate goal of implementing a barrier median to improve both safety and through travel service in this long-range planning study, it is intended that in areas where there is development or redevelopment potential, alternative access improvements such as combined entrances, interconnected parking lots, frontage roads, or new access off of side streets will be a part of those plans.**

**The raised median recommended south of Lake Zurich to Illinois 58 would restrict cross-median access to key locations such as signalized intersections. Existing right-turn ingress and egress would be maintained. In addition further study of this corridor may identify locations where it would be acceptable to provide left-turn in access and no-left-turn-out access in addition to the right-in/right-out access. This is beyond the scope of the SRA study and would require more detailed data and analyses to determine each location where this may be acceptable.**

# MEMORANDUM

Page 14

September 8, 1994

Ten comments were recorded opposing the intersection design at U.S. 12/Kensington/Illinois 83 for fear of through traffic entering local streets, especially Pine Street.

**The intersection developed at this location will be designed to physically prohibit through traffic traveling into Pine Street. This would be assured before any implementation of the proposed intersection design.**

Twin Links Golf & Putting went on record opposing the intersection design at U.S. 12/Kensington/Illinois 83.

**The proposed intersection would require acquisition of Twin Links Golf & Putting.**

The signals at U.S. 12 and Kensington and U.S. 12 and Illinois 83 should be retimed to solve the problem at this intersection.

**The signals are timed to progress traffic through the intersection. The two closely spaced intersection and the concentration of left-turn movements at these intersections severely restrict the ability to provide efficient timing. Retiming the signals is only one element of the solution at this location.**

Rolling Green Country Club voiced concern over the encroachment the recommended plan would have on the golf course. Subsequent to this meeting Rolling Green supplied a revised recommendation that would minimize the impacts to the country club.

**The recommendations made by the country club's consultant have been reviewed. In general, the proposed plan will be modified to show the cross section proposed by the consultant, thereby, minimizing encroachment to the country club property. More detailed engineering study and survey would be required prior to any final recommendation. The plan still maintains the recommendation that access be restricted at the entrance to the country club, prohibiting the left turn out of the country club.**

The LaSalle Bank at the intersection of U.S. 12/Kensington/Illinois 83 was concerned with additional right-of-way acquisition and potential loss of parking.

**The existing cross section along U.S. 12 at this location consists of three lanes southbound. It appears that there is sufficient lateral dimension from the parking lot to the edge of pavement to avoid any loss of existing parking.**

# MEMORANDUM

Page 15

September 8, 1994

**Future detailed engineering during Phase I studies would confirm actual impacts.**

The owners of the shopping center at U.S. 12 and Old Rand Road expressed their concern stating that "IDOT and the Lake Zurich Village planned to move the stop light at our corner to a location north of the Clark Station, completely abandoning access from our location directly onto U.S. 12. As far as the SRA Route #12 Plan to eventually be six lanes, why not wait to move the stoplight when the six lanes are installed?" Concerns were expressed that moving the signal would significantly devalue their property.

**The plan recommends moving the Old Rand Road signalized intersection 500 feet north of the existing location to improve the intersection geometry and provide safer access and egress at Old Rand Road. Access to the shopping center would be maintained off Old Rand Road. Existing access is located off Old Rand Road not off U.S. 12. At this time priorities and funding for SRA improvements have not been established. Therefore, timing for the intersection improvements is not known. The exact configuration of this intersection will not be determined until subsequent Phase I studies have been performed and all impacts thoroughly evaluated.**

A business at the corner of U.S. 12 and Hicks Road stated that the required 22 feet of additional right-of-way would displace all employee parking with no place to replace it.

**Right-of-way needs along the SRA route are approximations. The next phase of engineering study, Phase I, will determine exact right-of-way requirements and impacts incurred by all property owners along the route.**

A comment was made that although there is need for improvement to the arterial street system, Rand Road, with its collection of businesses, may be the wrong road. It was suggested that Lake-Cook Road should be used until it intersects with Rand Road for the same purpose.

**Lake-Cook Road is also an SRA and is currently being planned for improvement. Even with improvements to Lake-Cook Road there will still be the need to improve the operation of U.S. 12.**

A comment was made suggesting all the property owners should be involved in the SRA discussions.

**The public involvement process for the SRA studies included not only the public hearings but a series of advisory panel meetings. These advisory**

# MEMORANDUM

Page 16

September 8, 1994

**panels were made up of local community officials. It was the responsibility of the panel members to share the information with their local constituents.**

It was suggested that eliminating a small segment of Kensington Road between U.S. 12 and Illinois 83 may eliminate the congestion at this intersection.

**A number of alternatives were investigated at this intersection location, including terminating a portion of Kensington Road. This was not considered a feasible alternative. Kensington Road has continuity west to U.S. 14 and east to U.S. 45 providing an important east-west connection. Furthermore, terminating this portion of Kensington Road would create additional turning movements at the intersection of Illinois 83 and U.S. 12, which would further degrade the operation of this already critical intersection.**

The Randcrest Neighborhood Association recorded concern over the access road proposed north of Lake-Cook Road and east U.S. 12.

**The access roads would be developed to provide access to the commercial properties adjacent to the east side of U.S. 12. The plan recommends that these roadways not encroach upon the residential areas but rather be located along the back of the existing commercial properties. In addition, special intersection designs could be developed to prohibit through commercial traffic from these access roads to enter into residential neighborhoods. The roadways are intended to be implemented over time as the area redevelops or opportunities arise.**

A comment was recorded expressing concern that the frontage road located east of U.S. 12 and west of Plum Grove would encroach on residential properties.

**See previous response.**

Ten comments were recorded opposing or concerned with the development of a future roadway paralleling the Commonwealth Edison utility line and connecting to Hintz Road. Concerns included increased traffic, the location of the power lines, roadway lighting, noise, and the overall impact to the surrounding residential properties.

**The plan to construct a new roadway paralleling the Commonwealth Edison utility line is being developed in conjunction with the long-range reconstruction of U.S. 12 to six lanes (three lanes in each direction of travel). The limited right-of-way in this area, in addition to the sensitivity of the land uses (i.e. cemeteries), makes it extremely difficult to provide the six-lane**

# MEMORANDUM

Page 17

September 8, 1994

**section while also providing left-turn channelization. The concept of developing this new roadway was developed in an effort to provide left-turn access into the residential areas to the west of U.S. 12, without impacting the cemetery or acquiring additional right-of-way from both sides of U.S. 12. More detailed surveys and study will be necessary before a final solution can be established. It may be possible to acquire sufficient right-of-way to provide left-turn channelization at the existing location, thus precluding the need for the new roadway. For planning purposes the concept of developing the local roadway along the Commonwealth Edison right-of-way will be maintained with the understanding that further study is required to ensure that there are no other reasonable alternatives.**

Two comments were recorded by residents of Greenwood Court concerned with their access to U.S. 12. Concerns included limited access to U.S. 12 as well as drainage issues.

**Because there is no access along Greenwood Court to the south and the only access to U.S. 12 is at the north end of Greenwood Court, access will have to be provided at the north end. The manner in which access will be provided will depend on the ability to implement the proposed roadway along the Commonwealth Edison utility line. Future studies will be performed to identify the preferred solution at this location. One alternative, however, shown in Exhibit C-16, would be to realign Greenwood Court to intersect with the future road. If the local road is not developed as part of the U.S. 12 plan, the existing access would be maintained.**

How much does the Goebbert's Farm Market need to be set back from the right-of-way?  
How will customers get in?

**Because only 5 feet of additional right-of-way needs to be acquired at this location it is unlikely that the building will require any additional setbacks to avoid total acquisition. Future Phase I studies, however, will determine exact right-of-way needs. Access at this location will be limited to right-turn in/right-turn out. As with other locations there is the possibility that future studies may determine that left-turn in/no-left-turn out may be acceptable at this location.**

**TO:** Mark L. Schoeffmann, P.E.  
Director of Engineering-Arlington Heights

**COPIES:** Tim Neuman, P.E./CH2M HILL

**FROM:** Rich Starr, P.E./IDOT  
Dick Stafford, P.E./CH2M HILL

**DATE:** September 8, 1994

**SUBJECT:** U.S. 12 SRA Study

**PROJECT:** GLT 31495.02.A5  
P-91-126-90 (PSB#68/3)

This memorandum documents responses to the Village of Arlington Heights' comments regarding the proposed U.S. 12 (Rand Road) Strategic Regional Arterial (SRA) proposed corridor plan. The responses to each comment follow the Village's statement.

### 1. Barrier Median

*The continuous barrier median would have a severe detrimental impact on the economic viability of existing commercial developments and access for emergency vehicles. This would restrict access to over 20 individual businesses along Rand Road in Arlington Heights that at the present time do not have the capability of shared access to a signalized intersection. This proposal should not be implemented without the State's involvement in developing access for these properties. The lack of full access will also result in more commercial traffic using the local residential street network. Breaks in the median for emergency vehicle U-turns should also be provided when there are long distances between signalized intersections.*

In areas where a barrier median is recommended as part of SRA improvements, but a flush or mountable median exists currently, the implementation of the barrier median will be undertaken in a manner that fully considers the needs of adjacent businesses to maintain access onto and off of the SRA route.

By establishing the ultimate goal of implementing a barrier median to improve both safety and through travel service in this long-range planning study, it is intended that in areas where there is development or redevelopment potential, alternative access improvements such as combined entrances, interconnected parking lots, frontage roads, or new access off of side streets will be a part of those plans.

# MEMORANDUM

Page 2

September 8, 1994

The proposed raised median would restrict and limit access to commercial development at some locations along U.S. 12. Before implementation of any raised median, future studies will be performed to measure damages and identify alternatives for accommodating access. Median breaks and provision for U-turns would be provided to accommodate emergency vehicles and to minimize the potential for commercial traffic circulating into the local residential streets.

## **2. Roadway Widening**

*Many public utilities exist in the Rand Road right-of-way. The proposed widening will result in the paving of the areas where these utilities exist. Sufficient right-of-way must be obtained and sufficient funds appropriated to arrange for the relocation of these utilities. Failure to relocate these facilities will result in the frequent closure of the curb lanes for utility maintenance, repair, and replacement.*

Utilities that exist within the border area adjacent to the existing edge of pavement or under the existing pavement may require relocation. The locations of underground utilities were not identified as part of the SRA planning process. Future Phase I studies will determine the extent of additional right-of-way requirements and constructions costs.

## **3. Future Park-and-Ride Facility Site at Route 53**

*The Village's Comprehensive Plan calls for commercial development at this location. The elimination of the Frontage Road/Wilke Road connection to Rand Road has a severe impact on the development possibilities of this 3.5-acre vacant parcel. The commercial development or implementation of a park-and-ride facility at this location would be difficult without full access to Rand Road.*

The intent of the plan was not to identify or delineate the location for park-and-ride facilities. The intent of the plan was to address the desirability of providing park-and-ride facilities in the vicinity of intersections of two SRA routes. The note on the exhibit will be revised to clarify the intent of this recommendation.

## **4. Hintz Road Extension on Commonwealth Edison Right-of-Way and Cul-de-Sac on Greenwood Court**

*The reconfiguration of roadways in this area has several detrimental impacts on the adjacent properties. The extension of Hintz Road brings a roadway element into an area where it has never before been proposed or anticipated. Owners of the adjacent*

# MEMORANDUM

Page 3

September 8, 1994

*residential properties have already expressed their concern (letter attached). We recognize the traffic needs that this roadway will address but feel that the environmental concerns must be addressed before we can accept this proposal. Also, a cul-de-sac is proposed for Greenwood Court where it intersects Rand Road. This private roadway is only accessed via Rand Road and has no access to the south. Access for this roadway must be provided.*

The potential environmental concerns associated with the relocation of the frontage road along the existing Commonwealth Edison utility lines including air, noise, and visual impacts are recognized. A thorough assessment of environmental impacts would be performed before implementing this alternative.

From a transportation service standpoint, the most desirable plan would be to develop the future frontage road along the Commonwealth Edison Utility Line. Recognizing the concerns of adjacent land owners, other alternatives would be investigated during Phase I studies. A potential alternative would be to develop a left-turn lane northbound at the intersection of U.S. 12 and Wilke Road. This intersection would provide access to the frontage road, the apartment complex to the west, and the cemetery to the east. Signal spacing at this location would not meet SRA criteria. Future Phase I studies would determine whether this alternative would be feasible. At the time of this study the limited right-of-way and the potential impacts to the cemetery precluded this recommendation.

With respect to access from U.S. 12 at Greenwood Terrace, the plan has been revised to show access to the relocated frontage road. This would require some right-of-way acquisition. If the frontage road is not relocated opposite Hintz Road, the plan recommends that existing access be retained.

## **5. Chestnut Avenue/Techny Road Intersection**

*The report correctly identifies the future extension of Techny Road to intersect Rand Road at Chestnut Avenue. The plan does not clearly indicate that a traffic signal is proposed at this location. A traffic signal at this location should be a part of the recommendations.*

At the present time a traffic signal is not warranted at this location. However, as future development in the area intensifies a signal may be warranted. The spacing of this intersection to adjacent signalized intersections would meet SRA criteria (1/4 mile). Therefore, implementing a signal at the intersection of Chestnut Avenue and U.S. 12 would not be incompatible with the proposed SRA plan. A signal should not be implemented until warrants are met.

# MEMORANDUM

Page 4

September 8, 1994

## **6. Elimination of Traffic Signal at Annex Shopping Center**

*The draft final report proposes the elimination of the first traffic signal on Rand Road west of Arlington Heights Road. This signal provides the only full-access point to the Annex Shopping Center on the west side of Rand Road. This center currently contains 142,000 square feet of retail space and the owners are planning an expansion. This controlled full access must be maintained.*

This signal was recommended for removal to improve and meet SRA criteria for signal spacing. By removing the signal at this location, quarter-mile spacing is achieved. This signal will not be removed without further study. If in fact adequate access cannot be developed and alternative solutions are not identified, the signal will be retained.

## **7. Camp McDonald Road Intersection**

*The Village's long-range plan calls for the extension of Oakton Street to meet Camp McDonald Road at Rand Road. We are requesting that this be shown in the report.*

The plan has been revised to show the Village's long-range plan.

IN RE: )  
 )  
STRATEGIC REGIONAL ARTERIAL )  
 )  
OPERATION GREENLIGHT )  
 )  
U.S. 12 (RAND ROAD) )  
ILLINOIS 31 TO ILLINOIS 58 )

LAKE COUNTY PUBLIC HEARING

REPORT of comments made at the public  
hearing of the above-captioned study and summary of  
recommendations, taken before Joan M. Kenny, C.S.R.,  
a Notary Public in and for the County of DuPage,  
State of Illinois, at Park District Headquarters,  
600 N. Main Street, Wauconda, Illinois, on Wednesday,  
the 27th day of October, A. D. 1993, between the  
hours of 2:00 and 7:00 P. M.

IN RE: )  
)  
STRATEGIC REGIONAL ARTERIAL )  
)  
OPERATION GREENLIGHT )  
)  
U.S. 12 (RAND ROAD) )  
ILLINOIS 31 TO ILLINOIS 58 )

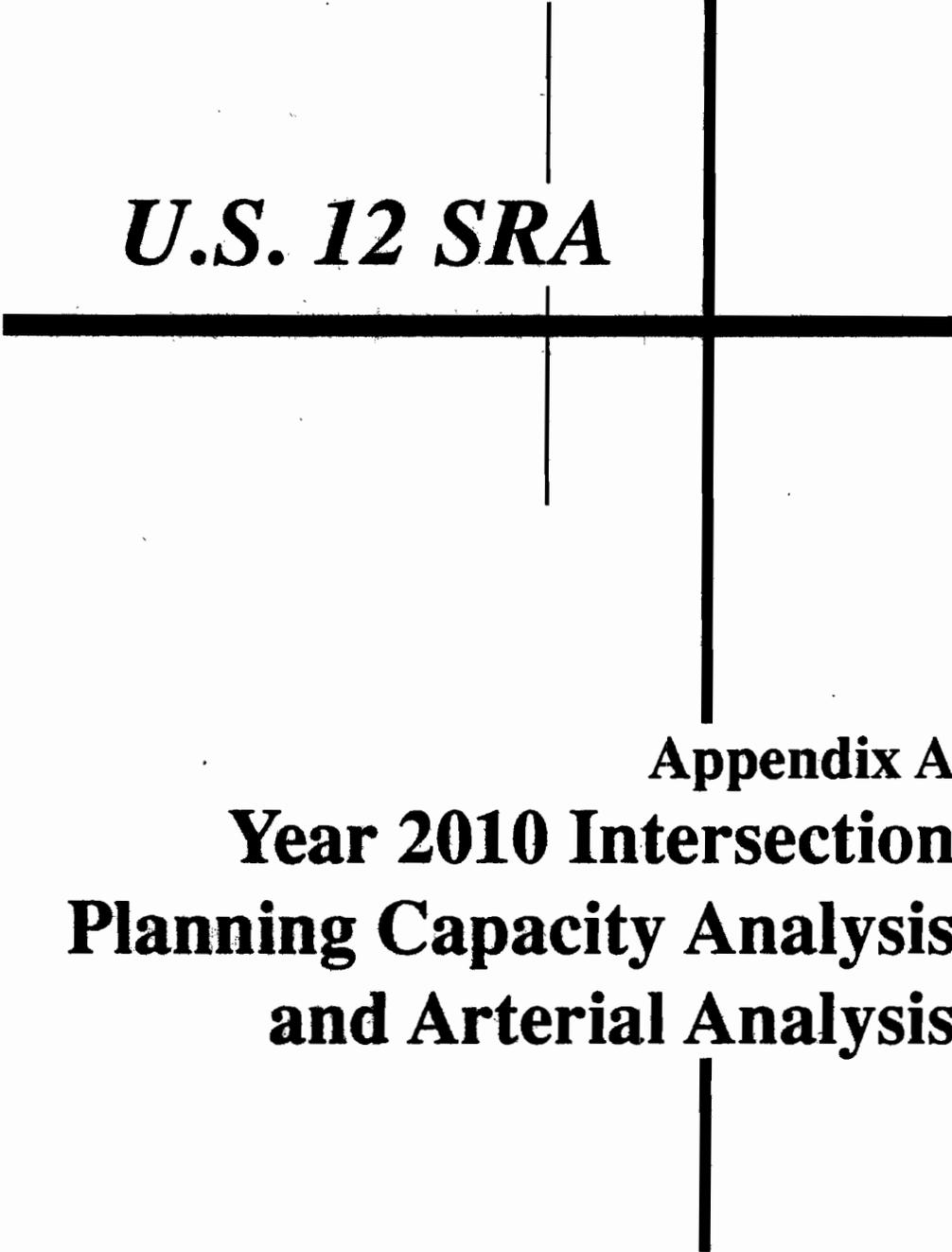
MCHENRY COUNTY PUBLIC HEARING

REPORT of comments made at the public hearing of the above-captioned study and summary of recommendations, taken before Joan M. Kenny, C.S.R., a Notary Public in and for the County of DuPage, State of Illinois, at Memorial Hall, 10308 Main Street, Richmond, Illinois, on Tuesday, the 2nd day of November, A. D. 1993, between the hours of 2:00 and 7:00 P. M.

IN RE: )  
)  
STRATEGIC REGIONAL ARTERIAL )  
)  
OPERATION GREENLIGHT )  
)  
U.S. 12 (RAND ROAD) )  
ILLINOIS 31 TO ILLINOIS 58 )

COOK COUNTY PUBLIC HEARING

REPORT of comments made at the public hearing of the above-captioned study and summary of recommendations, taken before Joan M. Kenny, C.S.R., a Notary Public in and for the County of DuPage, State of Illinois, at the Palatine Village Hall, 200 East Wood Street, Palatine, Illinois, on Thursday, the 4th day of November, A. D. 1993, between the hours of 2:00 and 7:00 P. M.



***U.S. 12 SRA***

**Appendix A**  
**Year 2010 Intersection**  
**Planning Capacity Analysis**  
**and Arterial Analysis**

**TABLE A-1  
U.S. 12**

**Year 2010 Intersection Planning Capacity Analysis**

U.S. 12 AND:	U.S. 12										CROSS ROAD										TOTAL V/C
	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH	V/C	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH	V/C					
IL 31 (SRA)	9300	10%	60	0.99	50%	279	L-TT-R	0.13	12000	10%	60	0.99	50%	360	LL-TT-R	0.12	0.25				
East/West Solon Rd	8000	10%	60	0.99	10%	48	L-T TR	0.13	5000	10%	60	0.99	30%	90	L-TR	0.18	0.32				
Sherwood Forest Dr	8000	10%	60	0.99	10%	48	L-T TR	0.13	5000	10%	60	0.99	30%	90	L-TR	0.18	0.32				
Winn Road	11000	10%	60	0.99	10%	66	L-T-TR	0.23	12000	10%	60	0.99	30%	216	L-TR	0.44	0.67				
Richardson Rd	11500	10%	60	0.99	10%	69	L-T-TR	0.24	12000	10%	60	0.99	50%	360	L-TR	0.44	0.68				
Johnsburg Wilnot Rd	15700	10%	60	0.99	10%	94	L-T-TR	0.32	12000	10%	60	0.99	30%	216	L-TR	0.44	0.76				
Fox Lake Rd	15700	10%	60	0.99	10%	94	L-TT T-TR	0.27	5000	10%	60	0.99	100%	150	L-R	0.18	0.46				
State Park Rd	25500	10%	60	0.99	10%	153	L-TT-R L-T-TR	0.53	5000	10%	60	0.99	50%	150	L-TR	0.18	0.71				
Oak St	25500	10%	60	0.99	20%	306	L-T-TR	0.54	5000	10%	60	0.99	30%	90	L-TR	0.18	0.73				
Grand Ave	25500	10%	60	0.99	20%	306	L-T-TR	0.54	12000	10%	60	0.99	30%	216	L-TR	0.44	0.98				
Sayton Rd	25500	10%	60	0.99	20%	306	L-T-TR	0.54	5000	10%	60	0.99	30%	90	L-TR	0.18	0.73				
Kings Dr	22200	10%	60	0.99	10%	133	L-T-TR	0.46	5000	10%	60	0.99	50%	150	L-TR	0.18	0.64				
IL 134 Big Hollows Rd	33700	10%	60	0.99	10%	202	L-TTT-R	0.45	12000	10%	60	0.99	20%	144	L-T-TR	0.26	0.71				
Brandenburg Rd	24000	10%	60	0.99	10%	144	L-TTT-R	0.32	5000	10%	60	0.99	30%	90	L-TR	0.18	0.50				
Sullivan Lake Rd Molidor Rd	20200	10%	60	0.99	10%	121	L-TTT-R	0.27	5000	10%	60	0.99	30%	90	L-TR	0.18	0.45				
Fox Lake Rd	20200	10%	60	0.99	10%	121	L-TTT-R	0.27	5000	10%	60	0.99	30%	90	L-TR	0.18	0.45				
*Old* IL 120	20200	10%	60	0.99	10%	121	L-TTT-R	0.27	5000	10%	60	0.99	30%	90	L-TR	0.18	0.45				
IL 120 (SRA)	23800	10%	60	0.99	20%	286	LL-TTT-R	0.25	20800	10%	60	0.99	20%	250	L-TT-R	0.36	0.61				
South of IL 120	18500	10%	60	0.99	10%	111	L-TTT-R	0.25	5000	10%	60	0.99	50%	150	L-TR	0.18	0.43				
North of Case Rd	14200	10%	60	0.99	10%	85	L-TTT-R	0.19	5000	10%	60	0.99	50%	150	L-TR	0.18	0.37				
Case Rd	25400	10%	60	0.99	10%	152	L-TTT-R	0.34	5000	10%	60	0.99	100%	150	L-TR	0.18	0.52				

**TABLE A-1  
U.S. 12**

**Year 2010 Intersection Planning Capacity Analysis**

U.S. 12 AND: Old Rand Rd/ Callahan Rd	U.S. 12										CROSS ROAD										TOTAL V/C
	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH	V/C	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH	V/C					
	25400	10%	60	0.99	10%	152	L-TTT TTT-R	0.34	5000	10%	60	0.99	100%	150	L-R	0.18	0.52				
Bonner Rd	23400	10%	60	0.99	10%	140	L-TTT-R	0.31	12000	10%	60	0.99	30%	216	L-TR	0.44	0.75				
Lake Shore Dr	27600	10%	60	0.99	10%	166	L-TTT-R	0.37	5000	10%	60	0.99	30%	90	L-TR	0.18	0.55				
McHenry Rd	29200	10%	60	0.99	10%	175	L-TTT TTT-R	0.39	12000	10%	60	0.99	100%	360	L-R	0.44	0.83				
Timberlake Rd	29200	10%	60	0.99	10%	175	L-TTT TTT-R	0.39	5000	10%	60	0.99	75%	150	L-TR	0.18	0.57				
Wynstone	29200	10%	60	0.99	10%	175	L-TTT TTT-R	0.39	5000	10%	60	0.99	75%	150	L-TR	0.18	0.57				
Miller Rd	25700	10%	60	0.99	10%	154	L-TTT-R	0.34	12000	10%	60	0.99	30%	216	L-TR	0.44	0.78				
N. Old Rand Rd	25700	10%	60	0.99	10%	154	L-TTT-R	0.34	5000	10%	60	0.99	50%	150	L-TR	0.18	0.53				
Signal Hill Rd	25700	10%	60	0.99	10%	154	L-TTT TTT-R	0.34	5000	10%	60	0.99	50%	150	L-R	0.18	0.53				
North of IL 22	25300	10%	60	0.88	20%	304	L-TTT-R	0.34	5000	10%	60	0.99	50%	150	L-TR	0.18	0.52				
IL 22 (SRA)	39800	10%	60	0.88	20%	478	LL-TTT-R	0.42	38300	10%	60	0.99	20%	460	LL-TTT-R	0.41	0.83				
Ela Rd	39800	10%	60	0.88	20%	478	L-TTT-R	0.53	20000	10%	60	0.99	30%	360	L-T-TR	0.40	0.93				
Deerpath Rd	36600	10%	60	0.88	10%	220	L-TTT-R	0.49	5000	10%	60	0.99	50%	150	L-TR	0.18	0.67				
N. Old Rand Rd	44900	10%	60	0.94	10%	269	L-TTT TTT-R	0.60	12000	10%	60	0.99	100%	360	LL-R	0.27	0.87				
Cuba Rd	56500	10%	60	0.99	10%	339	L-TTT-R	0.75	12000	10%	60	0.99	30%	216	L-T-TR	0.24	0.99				
Quentin Rd (SRA)	56500	10%	60	0.99	20%	678	LL-TTT-R	0.60	20000	10%	60	0.99	30%	360	LL-TTT-R	0.24	0.84				
Long Grove Rd	51100	10%	60	0.99	10%	307	L-TTT-R	0.68	12000	10%	60	0.99	30%	216	L-TT-R	0.22	0.91				
Plum Grove Rd	48300	10%	60	0.99	10%	290	L-TTT-R	0.64	5000	10%	60	0.99	30%	90	L-TR	0.18	0.83				
Lake-Cook Rd	48300	10%	60	0.99	20%	580	LL-TTT-R	0.52	20000	10%	60	0.99	30%	360	L-T-T-R	0.35	0.86				
Hicks Rd	34100	10%	60	0.99	10%	205	L-TTT-R	0.45	12000	10%	60	0.99	10%	72	L-T-TR	0.25	0.70				
South of Hicks Rd	48800	10%	60	0.99	100%	2928	L-TTT-R	0.65	5000	10%	60	0.99	30%	90	L-TR	0.18	0.83				

**TABLE A-1  
U.S. 12**

**Year 2010 Intersection Planning Capacity Analysis**

U.S. 12 AND:	U.S. 12										CROSS ROAD						TOTAL V/C
	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH	V/C	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH	V/C	
Old Hicks Rd	48800	10%	60	0.99	10%	293	L-TTT TTT-R	0.65	5000	10%	60	0.99	30%	90	L-R	0.18	0.83
Dundee Rd	48800	10%	60	0.99	10%	293	LL-TTT-R	0.59	28000	10%	60	0.99	20%	336	L-TT-R	0.49	1.07
Winslowe Dr	38700	10%	60	0.99	10%	232	L-TT-TR	0.57	5000	10%	60	0.99	30%	90	L-TR	0.18	0.75
Williams Dr	38700	10%	60	0.99	10%	232	L-TT-TR	0.57	5000	10%	60	0.99	30%	90	L-TR	0.18	0.75
Frontage Rd	38300	10%	60	0.99	10%	230	L-TTT-R	0.51	12000	10%	60	0.99	30%	216	L-T-R	0.29	0.80
Wilke Rd	46600	10%	60	0.99	10%	280	L-TTT TT-TR	0.68	12000	10%	60	0.99	50%	360	L-T-R L-R	0.29	0.97
Hintz Rd	46600	10%	60	0.99	10%	280	L-TT-TR	0.68	12000	10%	60	0.99	30%	360	L-TR	0.24	0.92
Kennicott Ave	36200	10%	60	0.99	10%	217	L-TTT TT-TR	0.53	5000	10%	60	0.99	100%	150	L-R	0.10	0.63
Mall Ent #1	34600	10%	60	0.99	10%	208	L-TT-TR	0.51	5000	10%	60	0.99	50%	150	L-T-R	0.12	0.63
Arlington Heights	38100	10%	60	0.99	20%	457	LL-TTT-R	0.41	34800	10%	60	0.99	20%	418	L-TT-R	0.60	1.01
Mall Ent #3	38100	10%	60	0.99	10%	229	L-TTT-R	0.51	5000	10%	60	0.99	30%	90	L-T-R	0.12	0.63
Palatine Rd	38100	10%	60	0.99	20%	457	LL-TTT-R	0.41	42000	10%	60	0.99	20%	504	LL-TTT-R L-TT-R	0.56	0.97
Mall Ent #4 (Dorothy Ave)	35400	10%	60	0.99	10%	212	L-TT-TR	0.52	5000	10%	60	0.99	50%	150	L-T-R	0.12	0.64
Margaret Ave	35400	10%	60	0.99	10%	212	L-TT-TR	0.52	5000	10%	60	0.99	50%	150	L-T-R	0.12	0.64
Dryden Ave	35400	10%	60	0.99	10%	212	L-TT-TR	0.52	5000	10%	60	0.99	50%	150	L-T-R	0.12	0.64
Thomas Ave Willow Rd	40200	10%	60	0.99	10%	241	L-TTT-R	0.54	18000	10%	60	0.99	20%	216	L-T-TR	0.38	0.92
Olive St	40200	10%	60	0.99	10%	241	L-TT-TR	0.59	12000	10%	60	0.99	30%	216	L-T-R	0.29	0.88
Camp McDonald Rd	39500	10%	60	0.99	10%	237	L-TT-TR	0.58	12000	10%	60	0.99	100%	720	L-TR	0.29	0.87
Schoenbeck Rd	39500	10%	60	0.99	10%	237	L-TTT TT-TR	0.58	12000	10%	60	0.99	100%	360	LL-R	0.24	0.82
Euclid Ave	39500	10%	60	0.99	10%	237	LL-TTT-R	0.42	35500	10%	60	0.99	30%	639	L-TT-R	0.62	1.04
N. of Elmhurst Rd	36100	10%	60	0.99	10%	217	L-TTT-R	0.48	5000	10%	60	0.99	30%	90	L-T-R	0.12	0.60

**TABLE A-1  
U.S. 12**

**Year 2010 Intersection Planning Capacity Analysis**

U.S. 12 AND:	U.S. 12										CROSS ROAD					TOTAL V/C	
	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH	V/C	TWO-WAY ADT	K	D	ROADSIDE FRICTION	% TURNS	LT TURN VOLUME	LANES ON APPROACH		V/C
Elmhurst Rd (IL 83)	36100	10%	60	0.99	10%	0	TTT-R	0.39	43500	10%	60	0.99	20%	522	LL-T-TR	0.52	0.91
Kensington Foundry Rd	36500	10%	60	0.99	10%	0	TTT-R	0.49	20000	10%	60	0.99	10%	120	T-TR	0.24	0.73
South of Kensington Rd	36500	10%	60	0.99	10%	219	L-TTT-R	0.49	5000	10%	60	0.99	100%	300	L-T-R	0.12	0.61
Business Chtr Dr	36500	10%	60	0.99	10%	219	L-TT-TR	0.54	12000	10%	60	0.99	100%	720	LL-R	0.24	0.78
Mt Prospect Rd	39900	10%	60	0.99	10%	0	TTT-R	0.43	12000	10%	60	0.99	100%	720	L-T-R L-TR	0.29	0.71
Central Rd	39900	10%	60	0.99	10%	239	L-TT-TR	0.59	29800	10%	60	0.99	10%	0	TT-R	0.36	0.94
South of Central Rd	39900	10%	60	0.99	10%	0	TTT-R TT-TR	0.48	5000	10%	60	0.99	30%	90	L-T-R L-R	0.12	0.60
Wolf Rd	40500	10%	60	0.99	10%	243	L-TTT-R	0.54	35900	10%	60	0.99	20%	431	L-TT-R	0.62	1.16
3rd Ave	40500	10%	60	0.99	10%	243	L-TTT TT-TR	0.54	5000	10%	60	0.99	100%	300	L-R	0.12	0.66
Golf Rd (IL 58)	40500	10%	60	0.99	20%	486	LL-TTT-R LL-TT-TR	0.43	35100	10%	60	0.99	20%	421	L-TT-R	0.70	1.13

**Table A-2  
Suburban Arterial Level of Service Analysis Inputs  
U.S. 12**

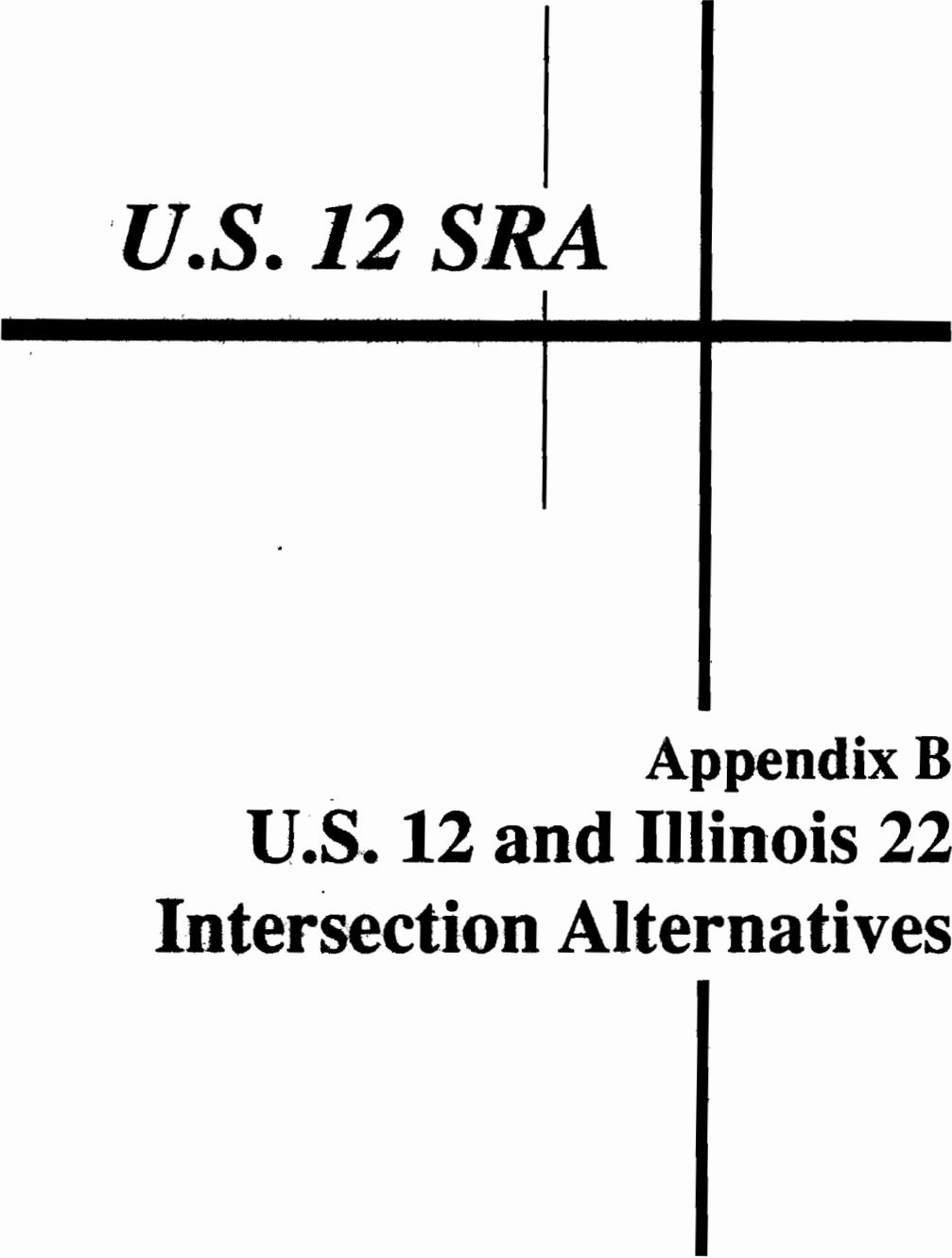
Intersection	Intersection Operations					Assumed Signal Operations					Arterial Type/Class and Speed <sup>h</sup>
	V/C <sup>a</sup>	Left Turn Volume <sup>a</sup>	Number of Left Turn Lanes <sup>a</sup>	G/C for Left Turn <sup>b</sup>	Thru G/C <sup>c</sup>	Capacity <sup>d</sup>	Cycle Length <sup>e</sup>	Arrival Type	Progression Factor <sup>g</sup>	Spacing to Next Intersection	
IL 31	0.25	279	1	0.19	0.46	1468	90	III	1.00	-	I-45
East/West Solon Rd	0.32	48	1	0.03	0.40	1276	90	III	1.00	14400	I-45
Shenwood Forest Dr	0.32	48	1	0.03	0.40	1276	90	III	1.00	14400	I-45
Winn Road	0.67	66	1	0.04	0.30	949	90	III	1.00	3750	I-45
Richardson Rd	0.68	69	1	0.05	0.30	975	90	III	1.00	2700	I-45
Johnsburg Willmot Rd	0.76	94	1	0.06	0.36	1157	90	III	1.00	5650	I-45
Fox Lake Rd	0.46	94	1	0.06	0.52	1678	90	IV	0.72	8500	I-45
State Park Rd	0.71	153	1	0.10	0.64	2048	90	IV	0.78	1900	I-45
Oak St	0.73	306	1	0.20	0.54	1732	120	V	0.62	1500	II-35
Grand Ave	0.98	306	1	0.20	0.35	1116	120	V	0.81	7850	II-35
Sayton Rd	0.73	306	1	0.20	0.54	1732	120	V	0.62	1500	II-35
Kings Dr	0.64	133	1	0.09	0.63	2002	120	V	0.56	2800	II-35
IL 134 (Big Hollows Rd)	0.71	202	1	0.13	0.50	2411	90	IV	0.78	7150	I-45
Brandenburg Rd	0.50	144	1	0.10	0.54	2591	90	IV	0.72	3800	I-45
Sullivan Lake Rd (Molidor Rd)	0.45	121	1	0.08	0.51	2468	90	IV	0.72	5000	I-45
Fox Lake Rd	0.45	121	1	0.08	0.51	2468	90	IV	0.72	2850	I-45
*Old* IL 120	0.45	121	1	0.08	0.51	2468	90	IV	0.72	2850	I-45
IL 120	0.61	286	2	0.10	0.32	1526	90	IV	0.73	800	I-45
South of IL 120	0.43	111	1	0.07	0.50	2398	90	IV	0.72	3850	I-45
North of Case Rd	0.37	85	1	0.06	0.45	2166	90	IV	0.72	3650	I-45
Case Rd	0.52	152	1	0.10	0.55	2626	90	IV	0.72	4000	I-45
Old Rand Rd/Callahan Rd	0.52	152	1	0.10	0.55	2626	90	IV	0.72	3200	I-45
Bonner Rd	0.75	140	1	0.09	0.32	1542	90	IV	0.80	2800	I-45
Lake Shore Dr	0.55	166	1	0.11	0.56	2674	90	IV	0.72	2100	I-45
McHenry Rd	0.83	350	2	0.12	0.35	1692	90	IV	0.72	4500	I-45
Timberlake Rd	0.57	175	1	0.12	0.56	2703	90	IV	0.72	2050	I-45
Wynstone	0.57	175	1	0.12	0.56	2703	90	IV	0.72	4750	I-45
Miller Rd	0.78	154	1	0.10	0.34	1608	90	IV	0.81	3180	I-45
N. Old Rand Rd	0.53	154	1	0.10	0.55	2634	90	IV	0.72	3230	I-45
Signal Hill Rd	0.53	154	1	0.10	0.55	2634	90	IV	0.72	2150	I-45
North of IL 22	0.52	304	1	0.20	0.45	2138	120	V	0.53	1200	I-45
IL 22	0.83	478	2	0.16	0.35	1682	120	V	0.69	1850	I-45
Ela Rd	0.93	478	1	0.32	0.25	1209	120	V	0.77	1900	I-45
Deerpath Rd	0.67	220	1	0.15	0.58	2786	120	IV	0.76	4000	I-45
N. Old Rand Rd	0.87	269	1	0.18	0.51	2446	120	IV	0.85	2980	I-45
Cuba Rd	0.99	339	2	0.11	0.57	2745	120	IV	0.87	1550	I-45
Quentin Rd	0.84	678	2	0.23	0.49	2348	120	IV	0.84	4750	I-45
Long Grove Rd	0.91	307	1	0.20	0.54	2613	120	IV	0.87	2350	I-45
Plum Grove Rd	0.83	290	1	0.19	0.59	2809	120	IV	0.83	3850	I-45

**Table A-2  
Suburban Arterial Level of Service Analysis Inputs  
U.S. 12**

Intersection	Intersection Operations				Assumed Signal Operations					Arterial Type/Class and Speed <sup>h</sup>	
	V/C <sup>a</sup>	Left Turn Volume <sup>a</sup>	Number of Left Turn Lanes	G/C for Left Turn <sup>b</sup>	Thru G/C <sup>c</sup>	Capacity <sup>d</sup>	Cycle Length <sup>e</sup>	Arrival Type	Progression Factor <sup>g</sup>		Spacing to Next Intersection
Lake-Cook Rd	0.86	580	2	0.19	0.40	1942	120	IV	0.84	1850	II-35
Hicks Rd	0.70	205	1	0.14	0.51	2451	120	IV	0.77	2600	II-35
South of Hicks Rd	0.83	293	1	0.20	0.58	2807	120	IV	0.83	1320	II-35
Old Hicks Rd	0.83	293	1	0.20	0.58	2808	120	IV	0.83	1500	II-35
Dundee Rd	1.07	293	2	0.10	0.45	2156	120	IV	0.90	1670	II-35
Winslowe Dr	0.75	232	1	0.15	0.60	2885	120	IV	0.80	1400	II-35
Williams Dr	0.75	232	1	0.15	0.60	2885	120	IV	0.80	1250	II-35
Frontage Rd	0.80	230	1	0.15	0.49	2329	120	IV	0.82	2700	II-35
Wilke Rd	0.97	280	1	0.19	0.52	2482	120	IV	0.89	850	II-35
Hintz Rd	0.92	280	1	0.19	0.55	2658	120	IV	0.87	2250	II-35
Kennicott Ave	0.63	217	1	0.14	0.70	3344	120	IV	0.74	1170	II-35
Mall Ent #1	0.63	208	1	0.14	0.67	3218	120	V	0.55	3920	II-35
Arlington Heights Rd	1.01	457	2	0.15	0.25	1201	120	V	0.82	1400	II-35
Mall Ent #3	0.63	229	1	0.15	0.65	3139	120	V	0.54	500	II-35
Palatine Rd	0.97	457	2	0.15	0.27	1280	120	V	0.71	1100	II-35
Mall Ent #4 (Dorothy Ave)	0.64	212	1	0.14	0.67	3219	120	V	0.56	800	II-35
Margaret Ave	0.64	212	1	0.14	0.67	3219	120	V	0.56	1100	II-35
Dryden Ave	0.64	212	1	0.14	0.67	3219	120	V	0.56	650	II-35
Thomas Ave (Willow Rd)	0.92	241	1	0.16	0.42	2025	120	V	0.76	1250	II-35
Olive St	0.88	241	1	0.16	0.51	2453	90	IV	0.85	2000	II-35
Camp McDonald Rd	0.87	237	1	0.16	0.51	2448	90	IV	0.85	1950	II-35
Schoenbeck Rd	0.82	237	1	0.16	0.55	2636	90	IV	0.83	3080	II-35
Euclid Ave	0.95	237	2	0.08	0.47	2274	90	IV	0.88	550	II-35
North of Elmhurst Rd	0.51	217	1	0.14	0.62	2976	120	IV	0.72	2600	II-35
Elmhurst Rd (IL 83)	0.85	433	2	0.14	0.31	1481	120	IV	0.84	720	II-35
Kensington Foundry Rd	0.73	219	1	0.15	0.52	2499	120	IV	0.83	350	II-35
South of Kensington Rd	0.61	219	1	0.15	0.66	3155	120	IV	0.72	900	II-35
Business Cntr Dr	0.78	219	1	0.15	0.54	2594	120	IV	0.81	2600	II-35
Mt Prospect Rd	0.71	0	0	0.00	0.75	3597	120	IV	0.81	3010	II-35
Central Rd	0.94	239	1	0.16	0.47	2247	120	IV	0.90	630	II-35
South of Central Rd	0.60	0	0	0.00	0.80	3840	120	IV	0.72	700	II-35
Wolf Rd	1.16	243	1	0.16	0.26	1233	120	IV	0.90	2820	II-35
3rd Ave	0.66	243	1	0.16	0.66	3150	120	IV	0.75	2230	II-35
Golf Rd (IL 58)	1.13	486	2	0.16	0.22	1057	120	IV	0.88	2130	II-35

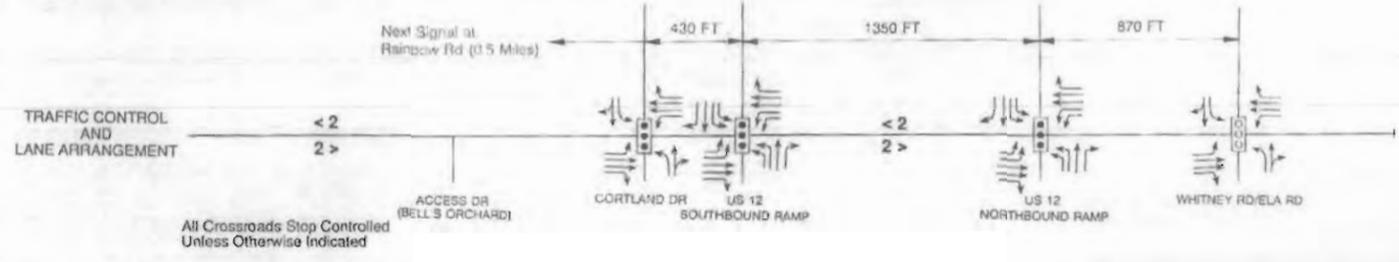
**Table A-2**  
**Suburban Arterial Level of Service Analysis Inputs**  
**U.S. 12**

Intersection	Intersection Operations				Assumed Signal Operations				Arterial Type/Class and Speed <sup>h</sup>	
	V/C	Left Turn Volume <sup>a</sup>	Number of Left Turn Lanes <sup>a</sup>	G/C for Left Turn <sup>b</sup>	Thru G/C <sup>c</sup>	Capacity <sup>d</sup>	Cycle Length	Arrival Type		Progression Factor <sup>g</sup>
From Intersection Planning Capacity Analysis--Table A-1										
$G/C \text{ for left turns} = \frac{\text{Left-turn Volume/Left-turn Lanes}}{1,500}$										
$G/C \text{ for through movement} = \frac{V/C \text{ for Irving Park Road}}{V/C \text{ for Intersection}} \quad \text{---} \quad G/C \text{ for Left Turns}$										
Capacity = 1,600 x number of through lanes x G/C (for through movement)										
Assumptions:                    signals: 60-90 seconds 3-Phase signals: 90-100 seconds 4-Phase signals: 120-150 seconds										
Assume Type III, IV, or V, depending on spacing of signals relative to SRA guidelines per Highway Capacity Manual										
Per Highway Capacity Manual Table 11-6										
Per Highway Capacity Manual - Assume Type III for urban SRAs										

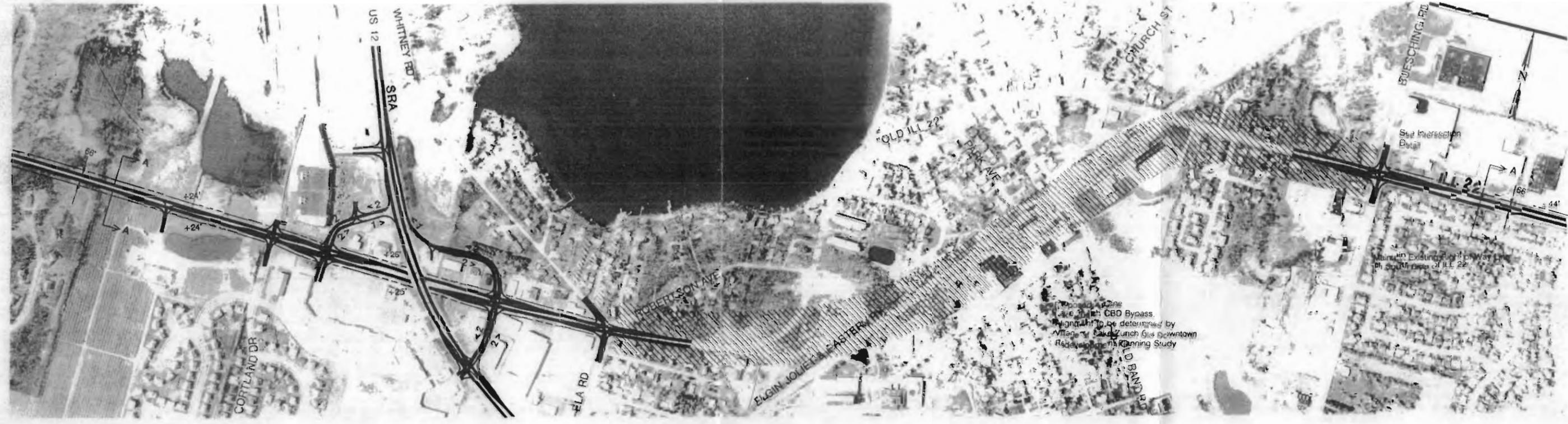
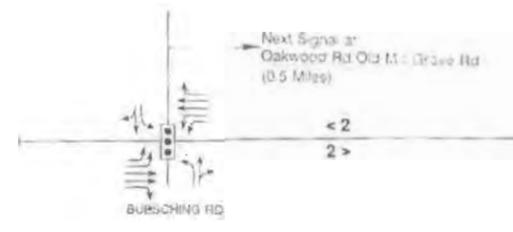


***U.S. 12 SRA***

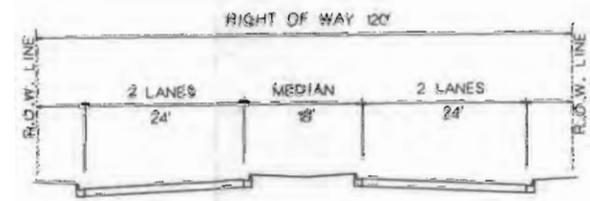
**Appendix B**  
**U.S. 12 and Illinois 22**  
**Intersection Alternatives**



Proposed 4 Lane Lake Zurich CBD Bypass



- LEGEND**
- EXISTING SIGNAL
  - POTENTIAL SIGNAL
  - SIGNAL TO BE REMOVED
  - PROPOSED LANE ARRANGEMENT
  - NUMBER OF LANES
  - FUTURE RIGHT OF WAY LINE
  - BUS STOP



ROADWAY SECTION A-A  
ACCESS DR (BELL'S ORCHARD) TO WHITNEY RD/ELA RD  
EAST OF BUESCHING RD  
(110 FT of right of way east of Buesching Rd)

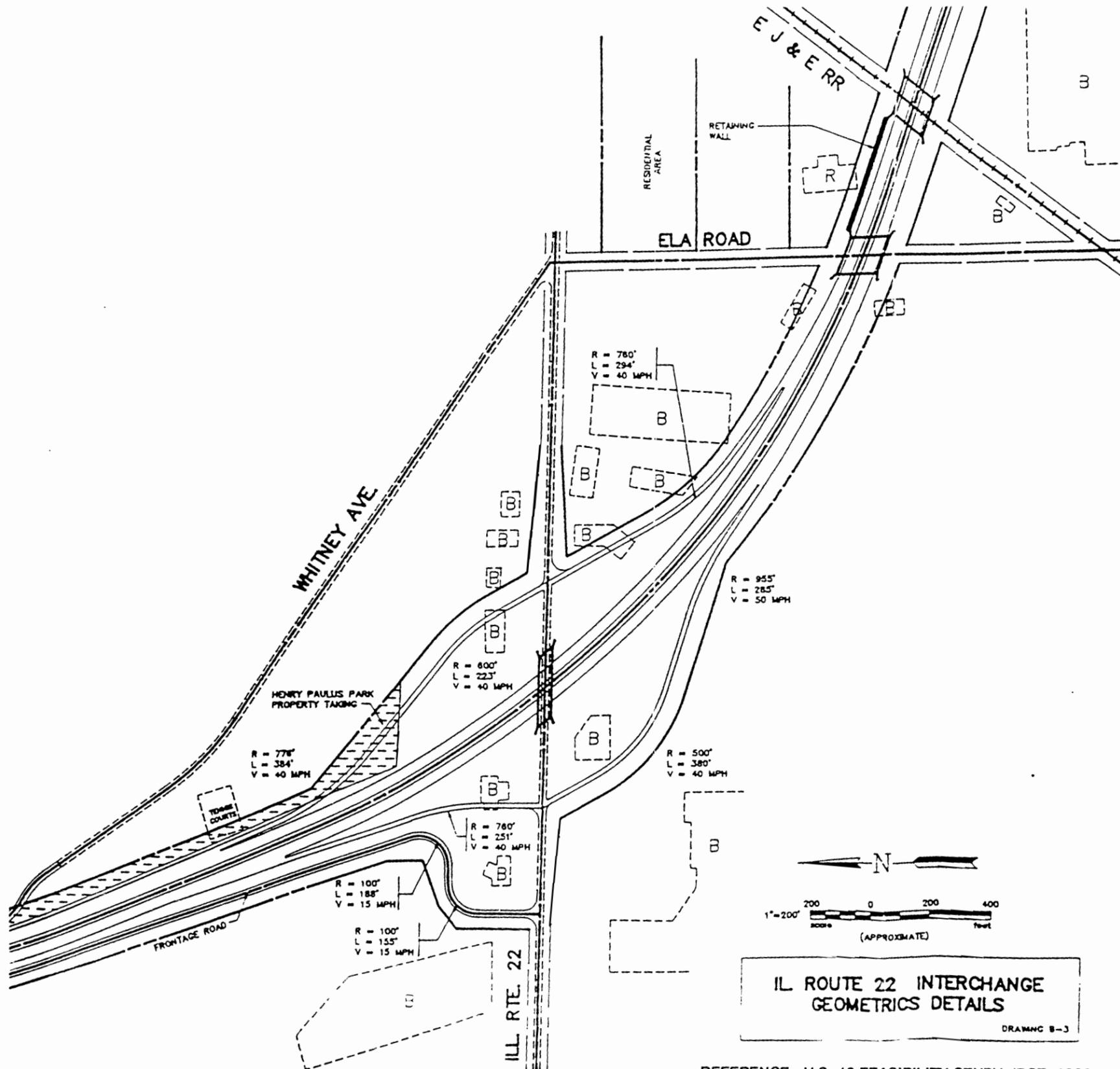
# U.S. 12 POSSIBLE INTERCHANGE PLAN

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

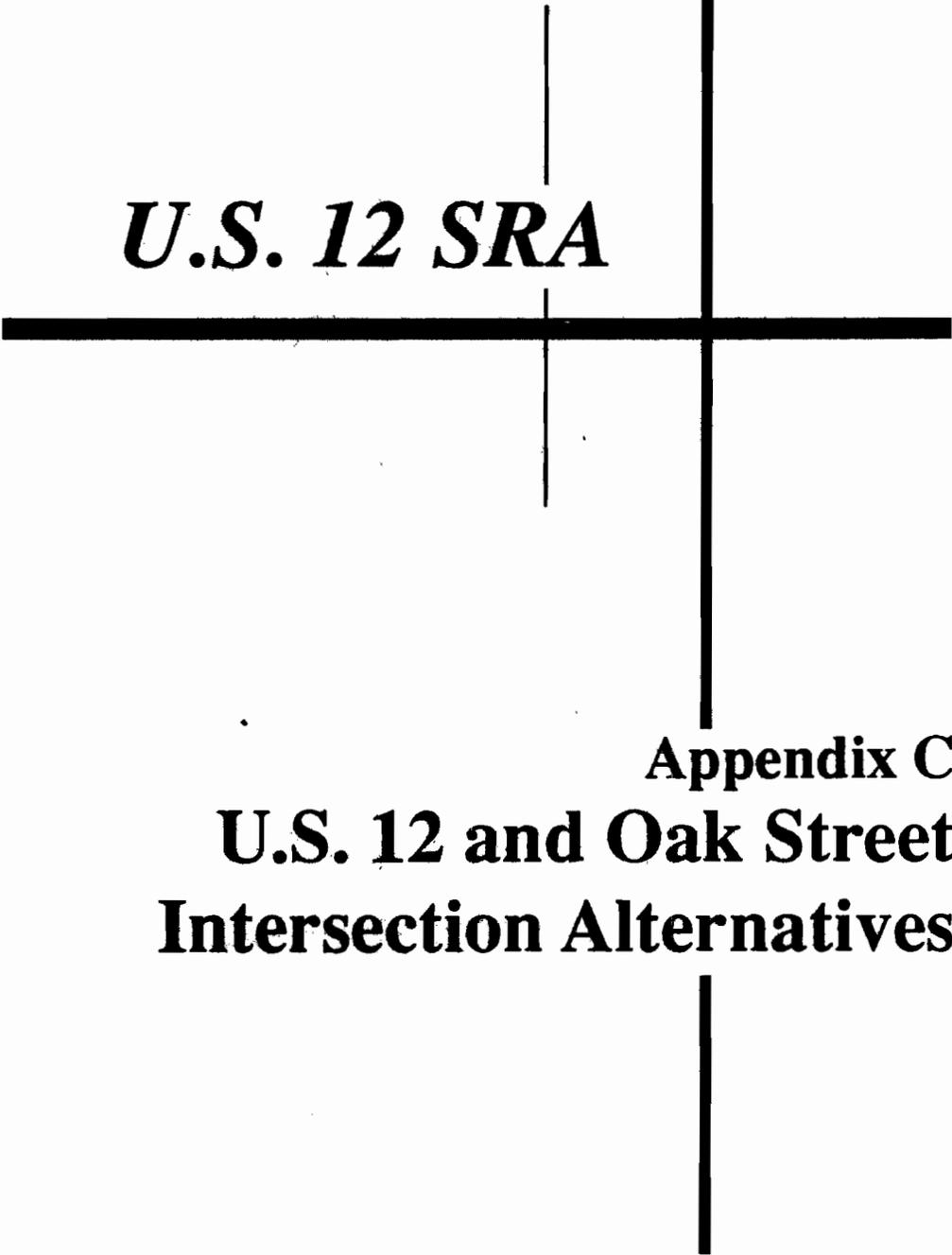
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial APP, EXHIBIT B-1 Planning Study



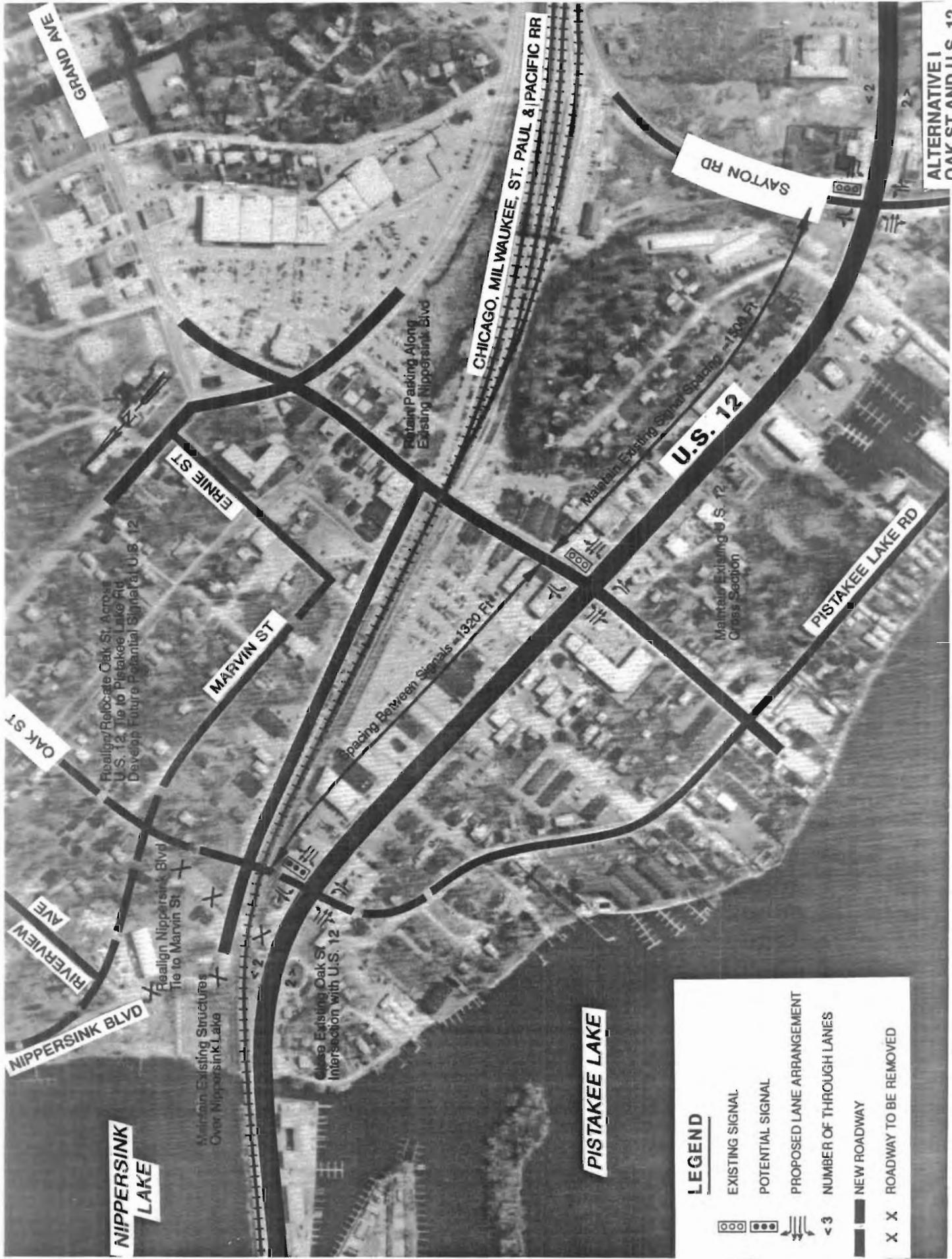


REFERENCE: U.S. 12 FEASIBILITY STUDY, IDOT, 1992.



***U.S. 12 SRA***

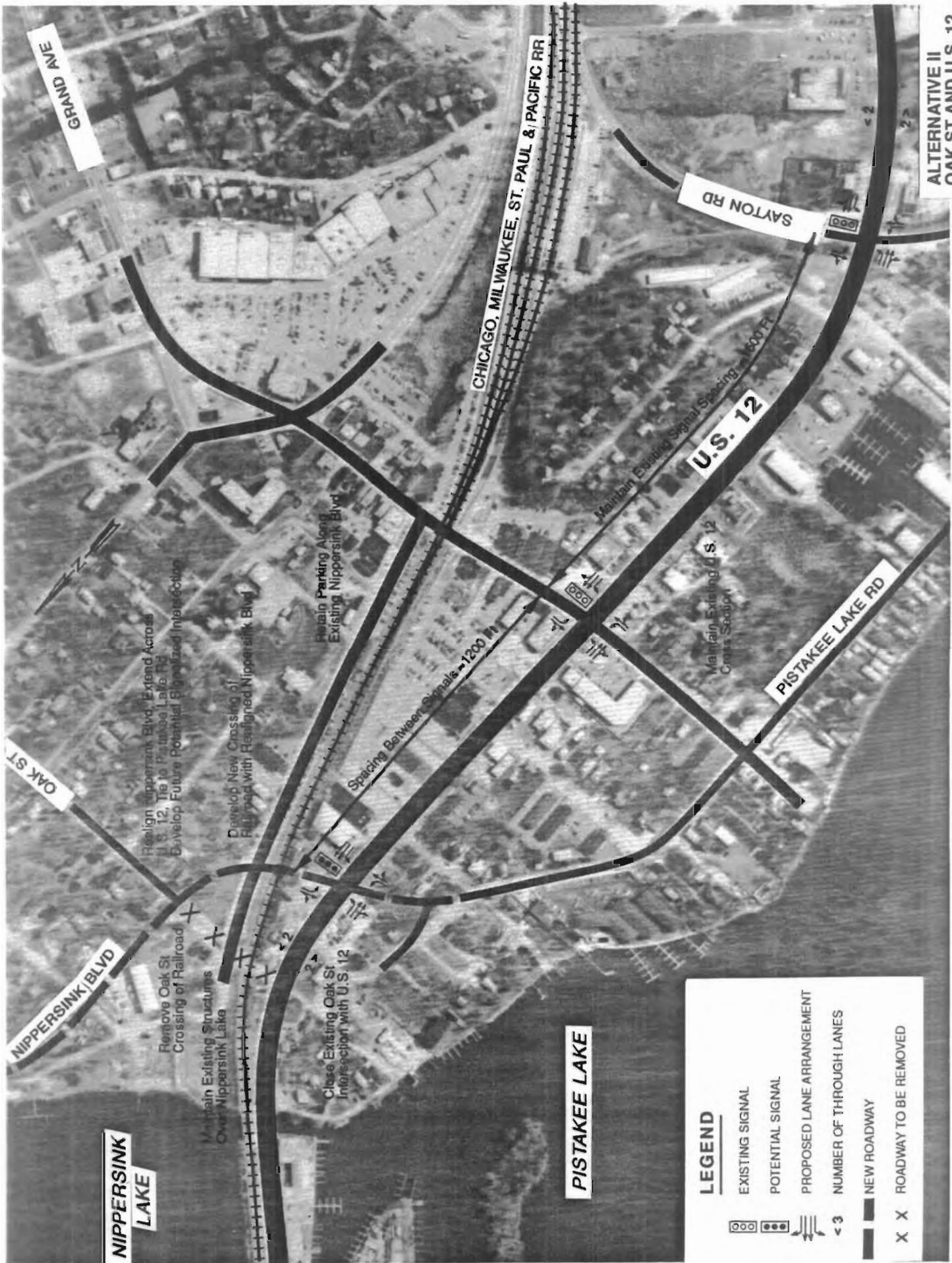
**Appendix C**  
**U.S. 12 and Oak Street**  
**Intersection Alternatives**



ALTERNATIVE I  
 OAK ST AND U.S. 12  
 EXHIBIT C-1

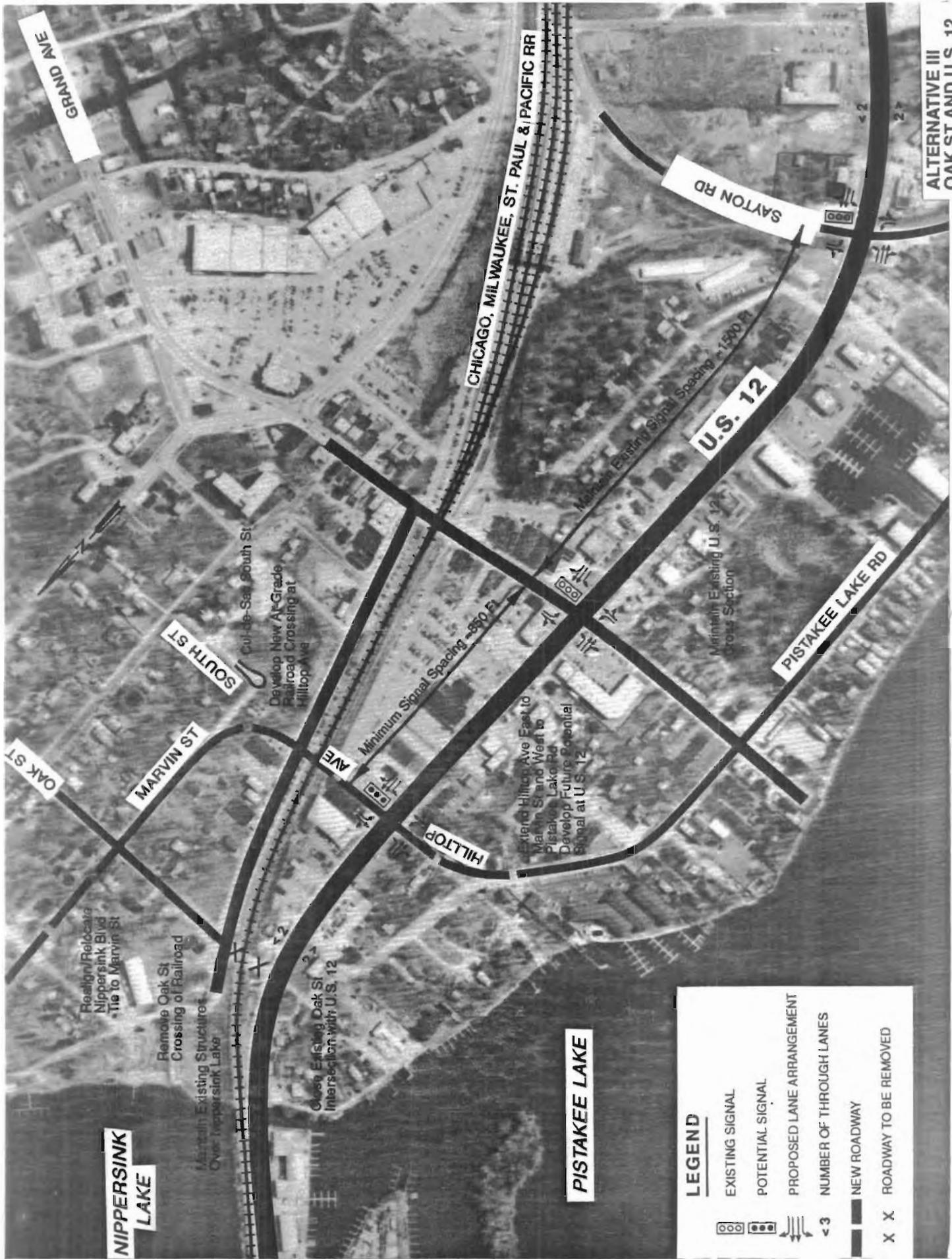
**LEGEND**

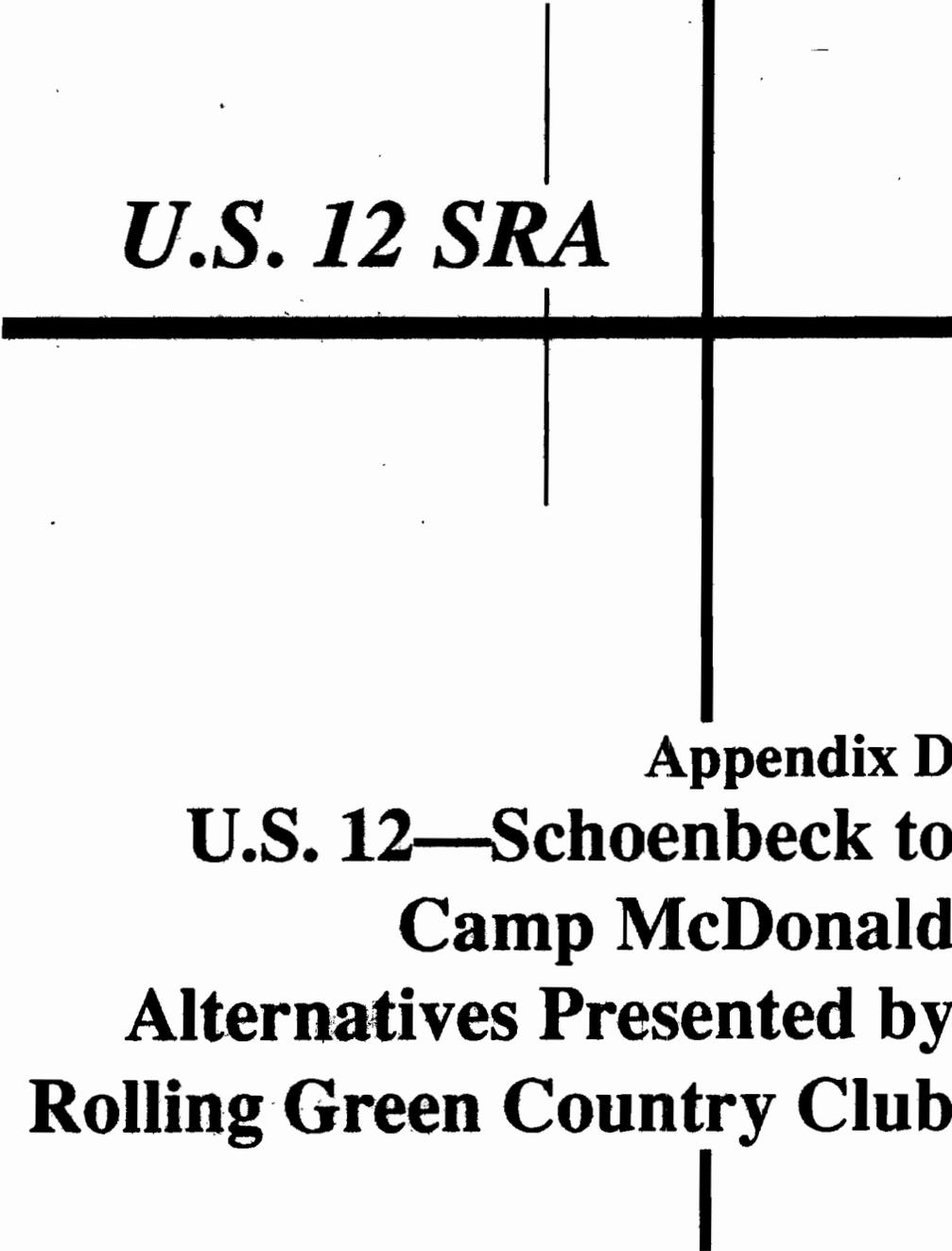
- EXISTING SIGNAL
- POTENTIAL SIGNAL
- PROPOSED LANE ARRANGEMENT
- NUMBER OF THROUGH LANES
- NEW ROADWAY
- ROADWAY TO BE REMOVED



**LEGEND**

-  EXISTING SIGNAL
-  POTENTIAL SIGNAL
-  PROPOSED LANE ARRANGEMENT
-  < 3 NUMBER OF THROUGH LANES
-  NEW ROADWAY
-  ROADWAY TO BE REMOVED





***U.S. 12 SRA***

**Appendix D**

**U.S. 12—Schoenbeck to  
Camp McDonald  
Alternatives Presented by  
Rolling Green Country Club**



# ROLLING GREEN COUNTRY CLUB

750 N. RAND ROAD • ARLINGTON HEIGHTS, ILLINOIS 60004-5897 • (708) 253-0400

December 3, 1993

BUREAU OF PROGRAMMING  
**RECEIVED**

DEC 6 1993

**DISTRICT #1**

ROLAND G. LEY  
*President*

ROBERT E. WAGNER  
*1st Vice President*

GEORGE F. FRATTO  
*2nd Vice President*

RALPH H. MARTIN  
*Secretary*

BENNETT P. TRAPANI  
*Treasurer*

RALPH E. AULENTA

WILLIAM B. BOGENSKI

MAX G. BRITTAIN, JR.

JAMES F. COLLINS

JOHN T. FAERBER

FRANCIS P. SATKO  
*Directors*

HUBERT KAHNICH  
*General Manager*

WILHELMA O. BAUMLE  
*Controller/Office Manager*

JOHN F. SCHICKLING  
*Golf Professional*

JOHN P. BERARDUCCI  
*Golf Course Superintendent*

Mr. Duane P. Carlson, P.E., District Engineer  
Illinois Department of Transportation  
201 West Center Court  
Schaumburg, IL 60196-1096

Attention: Walter S. Kos

RE: Strategic Regional Arterial (SRA) U.S. 12  
(Rand Road) Improvement Adjacent to  
Rolling Green Country Club  
(west side Rand and north side Euclid)

Dear Mr. Carlson:

Following the public meeting on Thursday, November 4, 1993 in Palatine, Illinois, at which the preliminary planning concepts for improving Rand Road were presented, the Club engaged Paul C. Box and Associates to advise them on the geometrics and traffic capacity elements of the proposed improvement. Specifically, we requested our consultant to consider reduced cross sections adjacent to the Rand side of the Club in order to minimize adverse effects on the adjacent tees, greens and fairways of Rolling Green Country Club.

Based on our consultant's work and other information, we offer the following comments on the proposed Rand Road improvement.

1. Our consultant has advised us that an improvement of Rand Road to six lanes plus left turn lanes at critical points is highly desirable. We support this concept.

2. We call to your attention the attached Exhibit A which, as you can see, is a Judgment Order entered by Judge Donald S. McKinlan on February 27, 1963 in the Superior Court of Cook County, Illinois which incorporates a Stipulation setting forth an agreement of the State of Illinois to perform certain obligations regarding essentially the eastern Rand Road border of our property "so long as the property of Rolling Green Country Club is used and operated as a golf course." (See Stipulation, page 7, paragraph 2). None of the

Mr. Duane P. Carlson  
Illinois Department of Transportation  
December 3, 1993  
Page Two

comments made in this letter should be construed as a waiver of any of the Club's rights conferred by the aforesaid Stipulation and Judgment Order.

3. Since February 27, 1963 the Club has acquired the property at the northwest corner of Rand and Euclid which is slightly more than a half acre in size. We are in the process of landscaping and incorporating that property into our golf course.

4. Our consultant looked at the preliminary proposed cross section as compared with existing conditions along Rand Road from the north limit of our property (about 3,700 feet north of Euclid) south to the throat widening he found needed for the Euclid intersection. It is this area where the most critical adverse impact would be felt on the golf course.

Our consultant has advised us that a nationally recommended way of specifying lane width is from lane line center to face of curb - a practice used in many cities, counties and states (reference Guidelines for Urban Major Street Design, a Recommended Practice of the Institute of Transportation Engineers, 1984). On this basis, he recommends the use of seven lanes of 11-foot width, but opines that the outer lanes should desirably be increased by one foot. This would produce an overall minimum width of 79 feet. Such a cross section would apply in the northbound left turn lane approaching our Rand Road entrance and the southbound left turn lane approaching Schoenbeck Road. In the area between these left turn lanes, beginning at the end of the lane approach tapers, a curbed median could be provided (9 feet in width) - thus giving a 12-foot adjacent lane width to the vertical face curb relative to the inbound through lanes.

The second factor involves the border width. The ITE recommended minimum is 7 feet and the AASHTO (1990 Guide) is 8 feet. However, to achieve such widths along Rand Road would require encroachment and destruction of scores of trees and bushes bordering our tees, greens and fairways. Our fence along the west side of Rand is located about 0.5 feet to 9.5 feet inside the State owned 100-foot right-of-way for much of its length. Any reduction, and/or westward relocation of this fence line, would have a serious and possible fatal adverse effect on the continued usage of our entire ninth, tenth and eleventh holes, including tees, fairways and greens. Our eleventh tee, just south of the Rand-Schoenbeck intersection, is only 10 to 15 feet west of the existing west right-of-way line. It was in consideration of these concerns, when the right-of-way was originally acquired for Rand Road widening, that the State entered into the Stipulation and Judgment Order

Mr. Duane P. Carlson  
Illinois Department of Transportation  
December 3, 1993  
Page Three

referred to in item 2 above. Thus, only 89 feet of right-of-way is currently available along this section of Rand.

Sheet 1 of Exhibit B shows the State proposed right-of-way of 110 feet and cross section for a proposed improvement. On the lower part of this drawing, our consultant has shown our proposed alternate cross section. This utilizes a reduction to 6 feet for the border area along the east side and to about 5.5 to 6.5 feet adjacent to the golf course fence. There are no significant terrain problems along either side of the road in this area and we, therefore, request the State's consideration in utilization of this minimum cross section in the area beginning approximately 800 feet north of the Euclid Road centerline and extending to approximately 3,700 feet north of the Euclid Road centerline. Also, because of the proximity of Rand Road to our golf course, we request the State to incorporate an acceptable sound barrier as indicated on Sheet 1.

5. Another consideration is right-of-way needs for the intersection improvement at Euclid and Rand. Our consultant has developed a suggested design, based upon rational projections of existing traffic. (See second paragraph below.) This design involves three through lanes in each direction on Rand plus dual north/south left turn lanes. No need was found for northbound or southbound added right turn lanes. On Euclid, he found a need for two through lanes in each direction plus one east/west left turn lane and a westbound right turn lane. He also agrees with the State design criteria that there should be at least a 4-foot wide barrier median adjacent to the left turn lanes on both Rand and Euclid in the approaches.

Sheets 2 through 5 of Exhibit B show the Rand Road design concept that is briefly reviewed above. The golf course is willing to reserve a 10-foot strip of right-of-way along the west side of Rand extending for 310 feet from the north line of Euclid plus an additional corner triangle to accommodate the southbound right turning radius shown on Sheet 2.

Our consultant has been in contact with Mr. Richard Stafford, who we understand is one of your consultants on the project. He advised us that he had no traffic counts available for the intersections of Euclid, Schoenbeck or our main entrance driveway with Rand Road. Therefore, our consultant had traffic counts taken during the AM and PM hours of a typical weekday at the most critical intersection of Rand/Euclid. Enclosed Figure 1 in Exhibit C shows the absolute peak hours extracted from the counts. A critical lane method type capacity analysis was then performed.

Mr. Duane P. Carlson  
Illinois Department of Transportation  
December 3, 1993  
Page Four

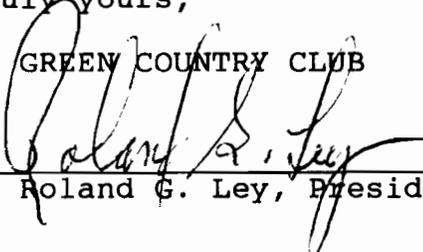
Additionally, our consultant reviewed ADT values from 1963 through 1990 as available from State count maps. From these data, he projected potential future intersection volumes for an assumed design year of 2010. See Figure 2. Utilizing capacity analysis, he then developed a suggested intersection design. This is somewhat different from that shown on the plan presented at the public meeting, relative to the numbers and types of turning lanes.

\* \* \* \* \*

Thank you for the opportunity to comment on this proposal.

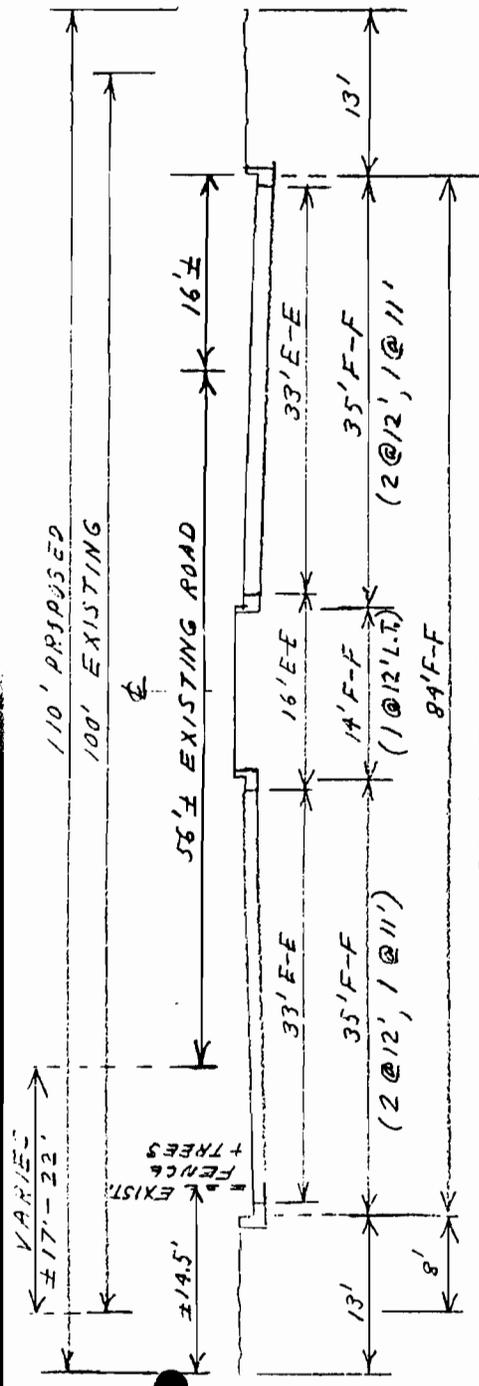
Very truly yours,

ROLLING GREEN COUNTRY CLUB

By  \_\_\_\_\_  
Roland G. Ley, President

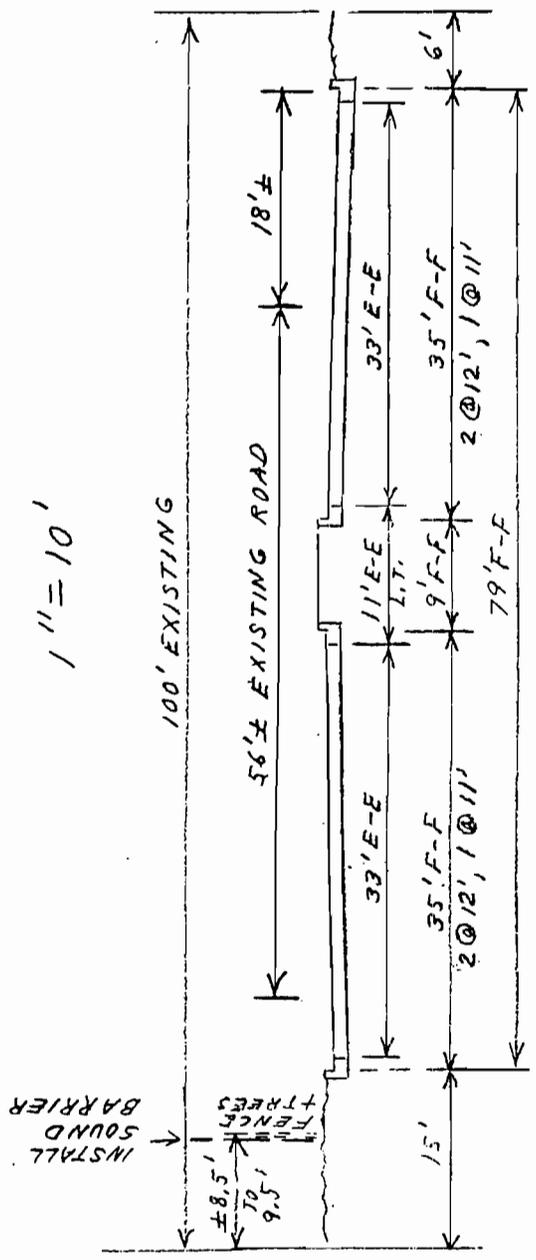
RGL/gg  
Enclosures

cc: Paul C. Box, Consultant  
John P. Biestek, Legal Committee



STATE PROPOSAL

1" = 10'



ROLLING GREEN PROPOSAL

CROSS-SECTIONS, LOOKING N.  
 N. OF CLUB ENTRANCE TO N. OF EUCLID  
 (800' N. TO 3700' N. OF RAND/EUCLID &)

Rand Rd, Design Alternate  
 P.C. BOX  
 1 DEC 93  
 SHEET 1